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THE GREAT WEST

A VAST EMPIRE

BY F. L. DANA.

SECRETARY INTER-STATE DEEP HARBOR COMMITTEE.

DENVER,  
COLO.



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# THE GREAT WEST

A VAST EMPIRE.

A COMPREHENSIVE HISTORY OF THE TRANS-  
MISSISSIPPI STATES AND TERRITORIES.

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CONTAINING DETAILED STATISTICS AND OTHER INFORMATION  
IN SUPPORT OF THE MOVEMENT FOR DEEP HARBORS  
ON THE TEXAS-GULF COAST.

---

—BY—

F. L. DANA,

SECRETARY OF THE INTER-STATE DEEP HARBOR COMMITTEE AND EDITOR OF THE  
COLORADO EXCHANGE JOURNAL.

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DENVER, COLORADO :  
EXCELSIOR PRINTING COMPANY.  
1889.

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Permanent Secretary Inter-State Deep Harbor Committee.

*F. L. Dana.*

## DEDICATION.

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This work is respectfully dedicated to the Inter-State Deep Harbor movement; to the Prairie Schooner Pilots and Pioneers, who discovered a New America; to the Promoters of this Vast Western Empire; and to the "Star of Empire" which has "westward had its way," until it has paused, never to renew its journey, (there is no other West). It stands fixed, perched upon the crown of the Mighty Monarch of the Rockies—Pike's Peak—the geographical center of the Great West. The Star shines with added lustre, as if happy to find its perpetual resting spot; its brilliancy encouraging the toiling millions of the West to persevere in the work of "building an Empire," (Gov. Gilpin's familiar expression early in the '60's), and here will it shine until the Great West shall become the center of the world's supply of breadstuffs, meats, cotton and woollen fibre, gold, silver, copper, zinc, tin, lead, iron, coal, oil and building material.

# "THE GREAT WEST,"

PUBLISHED MONTHLY BY THE

GREAT WEST PUBLISHING COMPANY,

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F. L. DANA, EDITOR.

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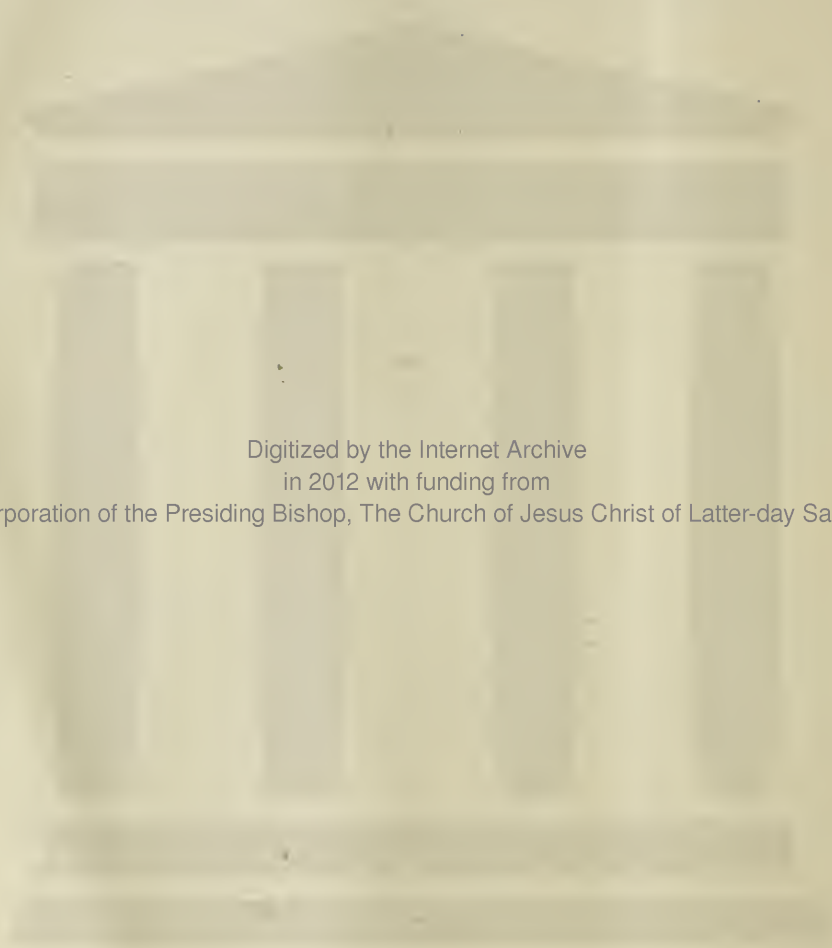
PART FIRST.

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## NOTICE.

"THE GREAT WEST" is published in the interests of the Inter-State Deep Harbor Committee, and its purposes are to inform the people of the United States regarding the immense resources of this "Vast Western Empire" and the importance to the country in general of the establishment of deep harbors on the Gulf coast of Texas. In concise form is presented a history of each state and territory west of the Mississippi River, in the regular order of their organization as states or territories, together with a review of their present resources, future prospects and paramount influence of the Great West upon the political horoscope of the United States. Americans have a too limited acquaintance with their own country. The citizens of the Eastern and Middle States, it is said (and probably true), know more of England and France than of this immense territory which lies west of the Mississippi River, comprising "The Great West." This work is published with the hope that it will aid in the grand missionary work being inaugurated throughout the East by the denizens of the Great West, and awaken within the breast of every citizen a patriotic pride in his own country and a thirst for information regarding the material resources of the one time misnamed "Great American Desert."





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## THE MISSION OF THE GREAT WEST.

WE present our readers with the first number of "The Great West," in full confidence of its favorable reception. This publication is devoted to the up-building of the West, and to the interests of the movement for deep harbors upon the Gulf coast of Texas. It is designed to inform the East regarding the immense resources of the Great West, each state and territory west of the Mississippi River, receiving in turn the special attention of the author, similar to that which Colorado receives in this number; the historical matter appearing in each issue; the descriptive in one number only, it being retired to permit of some other state or territory taking its place, the amount of descriptive matter being limited to the number of books sold in each state.

For every 100 books sold in a state, one page of descriptive matter will be inserted, either of state county or city, as may be designated by the subscriber.

### CONTENTS.

This issue contains a concise history of twelve states and ten territories, and descriptive matter of Shenandoah Valley, Denver, Colorado Springs, Green Mountain Falls, Manitou Park, Salida and Aspen in Colorado, and Salt Lake, Utah; with thirty-two illustrations, accompanied by thirty portraits of prominent Western men, cut on steel and wood.

### THE MECHANICAL MAKE-UP.

The paper (32,000 pounds), was purchased from Carter, Rice & Co., (Incorporation), of Boston, Mass., through their western agent, Frank S. Thayer, of Denver.

The type was set at the Excelsior Printing Company's spacious job rooms, under the direction of J. W. Nevatt, the manager, entirely new type having been purchased for this work. Mr. Nevatt will have entire charge of the publishing of all subsequent editions of the "Great West."

Nearly every illustration and portrait appearing in this number, was engraved expressly for this book, and reflects great credit upon the Denver engravers, Mills Engraving Company, Colorado Engraving Company, Frank Riestle, and Elgan the steel engraver, all of Denver. The work of each speaks for itself. It is a fact not generally known, that J. R. Elgan is the only steel portrait engraver west of the Mississippi River; he also executes scenic work, cards, monograms, autographs, crests, etc., on steel and copper, and does an extensive business in jewelry engraving.

Every page is electrotyped, either by Frank Reistle or John Creswell, both of Denver, both establishments being equipped with the latest improved machinery, capable of turning out the very best work upon the shortest notice.

The covers are lithographed by Collier & Cleveland, Lithograph Company, of Denver, an establishment not surpassed in Chicago, and not equalled west of that city.

The press work is done by the Rocky Mountain News Printing Company, on the latest improved Campbell presses, of which they have two, besides they have numerous other presses of larger and smaller dimensions.

The binding is done by J. C. Parker, who runs a large establishment, corner of Champa and Fifteenth streets, Denver.

The work was accomplished entirely in Denver, and all material used was purchased in Denver, or through local representatives of eastern concerns.

The book is comparatively free from errors, the few that have crept in will be corrected in future editions, which will also contain the latest official data obtainable.

#### AL TOWNSEND.

In connection with Denver, the name of Al Townsend should have appeared. He is an energetic and enterprising business man of Denver, and resides at Golden, twelve miles distant. Mr. Townsend recently established a real estate and abstract office in the city. He is the owner of the only set of Abstracts of Jefferson County, which includes a small portion of Denver to the west. As the city grows west, his set of abstracts will become almost invaluable. For sixteen years he was county clerk and recorder of that county, a highly respected and substantial citizen, and worthy of confidence. His acquaintance throughout the state is very extensive, and his knowledge of realty values is unexcelled.

#### A. A. M'GOVNEY.

In connection with Colorado Springs the name of A. A. McGovney should have appeared as one of the foremost promoters of that beautiful city. Mr. McGovney has resided in Colorado Springs since 1872, at which time the city contained less than 100 inhabitants, since grown to be a city of 12,000 population. He engaged in various pursuits until 1879, when he was elected County Assessor; continued as such until 1883, when he was elected County Treasurer, to which position he has been re-elected every election since, and now holds that very responsible position, a just estimate of regard by his fellow citizens. Mr. McGovney has ever been foremost in all enterprises which have combined to make Colorado Springs the beautiful and populous city it has grown to be. He has been an extensive dealer in real estate, and has prospered in proportion to his deserts. With E. J. Eaton, the County Clerk since 1879, he owns the only set of abstracts in the county; the same have grown from insignificance in 1879, when they began them, to be a very profitable and valuable set.

#### TOO LATE FOR THIS ISSUE.

Information regarding the public schools of Montana and the report of the Southern Pacific Railway Company were received too late to be printed in this number. School and railroad reports that have not yet reached us, we trust will be in time for our July number.

#### DEEP HARBOR ENGINEERS.

The Inter-State Deep Harbor Committee has succeeded in getting a board of United States engineers appointed to survey the Texas-Gulf coast, with a view of reporting to the next session of Congress the most feasible point on that coast to construct a deep harbor. The engineers are now on the coast, and have visited nearly all of the prospective harbor sites, and will be able to report to Congress, even if called in extra session in October next. Their report will form a basis upon which the Inter-State Deep Harbor Committee will work during the coming winter, to have Congress appropriate sufficient money to accomplish the work in the shortest possible time, let the report favor whichever port it may. The committee will probably meet before long to arrange for systematic work during the fall and winter. The interest should not be permitted to lag, but should be pushed in every state and territory interested, so that the general public shall become informed, and insist upon their representatives in Congress working for the necessary appropriation for the speedy construction of the proposed harbors. Conventions should be arranged in each state, in order that the agitation may attract general and special attention.



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# THE GREAT WEST.

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## CHAPTER I.

**W**HAT is the "Great West?" It is not "Buffalo Bill's Wild West," as is generally supposed in the East and in England. It is all of that portion of the United States lying west of the Mississippi River, and is usually understood to include Illinois and Wisconsin. Without the last two States, it comprises in area nearly two-thirds of the United States of America, and nearly one-third of the present population of the United States.

In wealth the great West is nearly equal to one-half of the entire United States; in natural resources it is equal to its area—two-thirds of the natural resources of the Union. Contrary to all heretofore published authorities, barring Dr. Strong in his work entitled "Our Country," the Great West is capable of sustaining a population in proportion to its vast area, and will ere many years dominate the Union. Its political, its financial and its social features—the significance of which is growing upon the civilized world, is having the effect that will bring about, within a few years, the greatest political revolution the world ever witnessed.

Ten or twenty years will probably witness the West in control of the government. The West has been accustomed to have its wishes and demands for justice in the apportionment of appropriations disregarded, its financial interests forced into Wall Street, and representation in national affairs denied. That is gradually being changed. The East is slowly relaxing its severe discipline of the West; the citizens of that division begin to feel the public pulse beating time to the onward march of progress, and in truth very soon will we realize that "Westward the Star of Empire hath its sway."

This mighty empire is well defined—the Mississippi river on the east, the Pacific ocean on the west, the Gulf of Mexico and the Mexican Republic on the south, and the British possessions on the north; and if the signs of the times be true, the northern boundary will ere long be the Arctic ocean and the southern line the Panama canal.

Erastus Wiman, of R. G. Dun & Co., has a communication in the January, 1889, number of the *North American Review*, upon the "Greater Half of the Continent." Referring to Canada, he attempts

to justify commercial union, and at the same time combat political union between the United States and that British province. We commend the spirit of union, but believe it should be both political and commercial, agreeing with that eminent American statesman, John Sherman. The greater half of the continent lies west of that line of demarcation which is generally applied when speaking of the Eastern or Western States of the Union, viz: the Mississippi River. The line extends south to the Gulf, and, extended north to the Arctic Ocean, would give the greater half of the continent to the West, the East representing less than one-fourth of the North American continent.

Long east and west lines are unnatural boundaries between peoples, and by actual comparison one may see how very remarkably true to this theory have the nations of Europe applied their map making. An east and west boundary line in either American continent is repugnant to nature. The Creator made these continents to lay lengthwise, north and south, connected by a narrow strip of land, which, pestilence ridden, forms a boundary almost impassible between the two continents.

Hon. T. F. Sorrells, of Arkansas, in a recent speech referred to the interchange of commodities as naturally belonging between zones, north and south; that the natural channels of trade were from north to south, and *vice versa*. This is quite easy of comprehension. The same zones have similar products, and consequently have no legitimate interchange. Unnaturally, however, the great east and west trunk lines have diverted traffic through a combination of capital and circumstances to the positive detriment of the Western people. Nature is gradually gaining the ascendancy in the matter of traffic, and these monster monopolies see the hand writing upon the wall; the centre of population and wealth is gradually creeping westward; the time approaches when the West will not pay tribute to New York or the railroad kings. The Santa Fe has a north and south line which connects their immense system with the Gulf; the Denver, Texas & Gulf railway connects Denver with the Gulf, which opens up a vast country north and west to the natural course of trade. Already the good effect of conforming to Nature's law of traffic is felt, though the great east and west trunk lines are dissipating as much as possible the bountiful blessings the Great West is sure to enjoy.

The 49th parallel of north latitude divides a people and outrages nature. It forms a barrier to traffic. As Mr. Wiman states: "The American has limitations on the north by a line drawn at the St. Lawrence and the lakes, and along the 49th parallel, against which his commerce beats as against an impenetrable wall, and like a wave rolls back upon itself. A night's journey from Boston or New York, and the limit of his boasted areas towards the north are reached; two nights and a day, even from Chicago, in the centre of his territory,



and the ground to the north covered by the trade of that great city is exhausted."

Therefore, political and commercial union will speedily follow the present agitation ; otherwise, annexation will be forced by the commercial demands of the great marts referred to by Mr. Winan. There is growing a West that can not be trifled with. The North and South has disappeared in smoke and death. The East and West have taken their places. The South, like the East, were for a time masters; their power waning, they resorted to violence to retain their ascendancy. Even now the power of our Eastern masters begins to wane, and they, too fond of their money bags to even resort to violence to retain their power, have been practicing extortion upon us, exacting excessive toll for transporting our persons, our products and necessities, demanding exorbitant interest for the use of their gold, and, Shilock like, exacting the pound of flesh nearest the heart for the least deviation from their own heathenish laws.

A Western Empire is forming; a financial centre (Denver) is established at the base of the Rocky Mountains, where nearly thirty millions of gold and silver annually concentrate, gathered from the everlasting treasure vaults of the Rocky Mountain range; where money goes begging for borrowers at from six to eight per cent. per annum interest; where palaces are being erected for the homes of the Western millionaires; where massive stone and brick blocks are being constructed to accommodate the present urgent demands of a constantly increasing commerce, made inevitable by the revolution taking place—natural currents of trade dominating the artificial, unhealthy and vicious channels formed by a greedy, grasping East, aided by monopolistic carriers.

Man can conceive of no mightier empire than the "Great West." That empire must have a capital. That capital must be central and accessible. The Star of Empire in its westward march has paused at Denver, and smiles upon that city, which it has christened and designated the empire's capital. Here wealth and learning, social and moral culture, have become firmly planted, and distinguished travelers have dubbed this city the

"QUEEN CITY OF THE PLAINS,"

—founded by tried men and true—men who waded in blood to reach this delightful mecca—travelled across the then great American desert, almost every step being disputed by the savage. Thousands of lives were lost in those trying days, and the prairies were strewn by bleaching human bones. It required a hardy, determined people to reclaim this Great West from the savage. It is accomplished, and many are now living who should receive the hero's badge of honor, having braved the hardships of explorers, that future generations might occupy in peace and plenty this grand empire destined to rule the nation.

The progress of the West stands as one of the marvels of the age. Prior to 1859, except the states bordering on the Mississippi and California, this immense interior was regarded as a great desert, barren of vegetation and abounding in great useless mountain ranges of perpetual snow. Thirty years has witnessed a wonderful transformation, beginning in 1859, by discoveries of gold where Denver now stands. The greed of gold stimulated the hardy pioneer to penetrate this trackless plain, and all at once it dawned upon the world that this plain was not a desert, but fertile and desirable public lands. These began to appreciate in value, until the land between the Mississippi and Missouri Rivers was practically appropriated by the western flow of population. The same irresistible tide of immigration moved westward, and is still moving westward at the rate of 25 to 30 miles per annum. Meanwhile a hardier class has outstripped the slow tide of immigration, and the coast and mountain states have been peopled, though sparsely, with a sturdy, progressive population, whose numbers are daily augmented, and whose wealth (especially Colorado) is greater per capita than any other people on earth. Colorado is the central state of this vast Western Empire, and might be said to concentrate within her borders the essence of wealth, contained west of the Mississippi River, which is equal to saying the entire Union.

Denver is the capital of the state, and admirably situated to become the capital of the Great West; (we accede to Pueblo the manufacturing business of this vast region.)

Fuller descriptions of states and cities will claim our attention later on in this article, which has an ultimate bearing upon the great subject of commerce and transportation, which is soon to occupy the undivided attention of this New West, and compel the National Congress to appropriate our share of the public "pap" to construct deep harbors upon the Gulf coast of our sister state—Texas, and otherwise improve transportation facilities, opening up to the entire west a direct and short line to the sea, and consequently to the markets of the world. Appropriately the first Western Commercial Congress assembled in Denver (the Inter-State Deep Harbor Convention), the latter part of last August. The movement was perpetuated, and by a happy arrangement the managing officers reside in Denver, and consequently the headquarters are firmly established here.

## CHAPTER II.

## LOUISIANA—1541 TO 1889.

**T**AKING up the Great West in detail, we naturally turn to Louisiana first.

"Louisiana" was the name given by La Salle in 1682 to all of that portion of the United States west of the Mississippi River (except Texas and New Mexico, then a part of Mexico), that lies between that river and the Rocky Mountains, including Idaho and Washington Territories and the State of Oregon.

This portion of the Great West was first discovered by De Soto in 1541, who, however, did not ascend the Mississippi beyond New Orleans. He died the following year, and was buried in the waters of that mighty stream. His followers were scattered, and no permanent settlement was effected until 1682, when La Salle descended the river from the Canadian settlements and took possession of this vast region in the name of Louis XIV, in whose honor he named the country Louisiana. It is generally believed, however, that no settlement of importance was effected before 1699, and not until 1706 was New Orleans established. The little colony, headed by Bienville, in that year unfurled the flag of France. The French crown retained possession of this territory until 1762, when it fell into the hands of the Spanish crown, and was severely ruled until 1800, when it again fell into the possession of France, and in 1803 was purchased from the French by the United States for \$15,000,000. In 1804 the United States divided this territory and named what is now known as Louisiana, the Territory of Orleans, which was admitted in 1812 as a state, under the name of Louisiana. In the same year war with England was declared, and in 1814 New Orleans became famous because of its noble defense by General Jackson, with 5,000 men, against Sir John Packenham, with 12,000 Britishers. The state grew rapidly thereafter, and to-day ranks very high, New Orleans being second only to New York in amount and value of domestic and foreign exports, amounting to about \$100,000,000 per annum. The inward bound coastwise cargoes to New Orleans are valued at about \$200,000,000 per annum, imports about \$20,000,000. The coastwise and foreign trade together amounts to nearly \$500,000,000 per annum.

The Eads jetty system has made it possible for deep-draught ocean-going vessels to enter the port at New Orleans. The only drawback to New Orleans as a port is the necessary towage of ninety-five miles from the jetties. The establishment of deep harbors on the Texas



coast will not affect the importance of New Orleans as a port of entry, as many suppose. The traffic that the proposed Texas ports will attract will be of a different class, affecting New York more than any other eastern port.

Louisiana contains 41,346 square miles, or 26,461,440 acres. Much of the State is lower than the high-water level of the rivers, and is protected by dykes or levees from inundation. The land is generally of great richness, produces sugar cane, cotton, rice, corn, tobacco, oranges, figs, bananas, peaches, etc.

Louisiana produces annually about 200,000 hogsheads of sugar, about 10,000,000 gallons of molasses, and about 500,000 bales of cotton, which is most all exported from the State. Other crops are most all consumed at home. The forests are extensive, containing several kinds of oak, hickory, locust, sassafras, mulberry and pine.

Louisiana has 1,256 miles of coast on the Gulf of Mexico; the Mississippi River flows through and along the State border for nearly 800 miles, and floats the commerce tributary for nearly 2,000 miles, and the Red and Washita Rivers are also navigable for quite a distance, bringing wealth to the great city of New Orleans.

The school facilities of Louisiana are second to no other Southern State, and are gaining rapidly upon some of the Northern States.

Rail connection has opened up a traffic between New Orleans and Denver which heretofore came by rail from New York, and has placed tropical fruits and sugar into Denver as cheaply as into Chicago. Denver and New Orleans are closely allied. We take their fruits, sugar and molasses, while they take our gold and silver, and the intervening sections our coal. The opening of the proposed Texas deep harbors will not materially affect the relations of New Orleans to Denver, but will materially affect Denver, as it opens up an European and South American trade to Denver which the disadvantages of New Orleans as a port of entry has heretofore barred us from. Texas deep harbors are a necessity, and we demand the immediate attention of Congress in their institution.

Soon after the completion of the Denver, Texas & Gulf Railroad, the direct rail connection, the New Orleans merchants held an exposition of their resources in Denver Chamber of Commerce. Their favorable reception caused the establishment in Denver of branches or agencies of their large mercantile houses, the result of which has been beneficial to both commercial cities.



## CHAPTER III.

## MISSOURI—1682 TO 1889.

WE take up Missouri second in our review of States and Territories, in the order of her seniority of State-hood. We will conform to that rule in our treatise of the sister-hood comprising "The Great West."

LaSalle descended the Mississippi River in 1682 and took possession of the country west of the Mississippi River in the name of Louis XIV, naming it Louisiana. Missouri was included in the cessions made by France to Spain in 1762, and by Spain retroceded to France in 1800, and purchased by the United States in 1803.

St. Louis was known as a fur-trading point as early as 1755, and had less than 1,000 inhabitants, and St. Genevieve had about 500 inhabitants. St. Louis was the capital of the District of Louisiana of the Territory of Orleans. When the State of Louisiana was admitted into the Union (1812) the Territory of Orleans was obliterated, and the Territory of Missouri was organized with St. Louis as its capital, which in 1817 contained about 5,000 inhabitants, while the Territory contained about 60,000. In that year the Territory knocked at the door of Congress for admission as a State, and precipitated a fierce excitement regarding the extension of slavery into the unorganized territory of the United States, and that came near disrupting the Union. A compromise was, however, effected, and the State admitted in 1820 under conditions set forth in what has ever since been known as "the Missouri compromise." The President's proclamation was not issued completing the admission, however, until August 10, 1821.

The State prospered, and at the breaking out of the rebellion in 1861 contained upwards of one million people, which has been augmented until the State contains nearly or quite 2,500,000 population.

The State contains 69,415 square miles, or 44,425,600 acres, and has 114 counties. Its chief cities are St. Louis, Kansas City, Hannibal and Jefferson City (the capital).

The Mississippi River runs the entire length of the State on its eastern boundary line (470 miles). The Missouri River forms a portion of the west boundary line, and deflects above Kansas City to the east, and flows across the State from west to east near its middle, and empties into the Mississippi River just above St. Louis. Both streams are navigable throughout their entire course through or along the State, the Missouri for 450 miles, and the Mississippi for 470 miles—over

900 miles of navigable waters available to the commerce of this great State. The profitable use to which this great natural commercial facility has been utilized, one need only point to the magnificent commercial centers, St Louis and Kansas City.

Missouri contains immense natural resources in the form of the baser metals and coal, the south half of the State being rich in coal, iron and lead, also timber. Notwithstanding the fact that the great swamp 100 miles wide starts in about Cape Girardeau and extends into Arkansas, Missouri produced more lead than any other State in the Union, until recently. Colorado now takes the lead by many thousand tons. The north half is rich in agriculture and some coal.

In 1880 there were in Missouri 215,575 farms, averaging 129 acres each, a total of 27,879,276 acres. Of these 16,745,020 acres were improved. Estimated value of farms, \$375,633,037.

In 1887 Missouri had in corn 6,406,785 acres, producing 140,949,000 bushels, valued at \$52,151,135. Wheat, 1,712,603 acres, producing 27,744,000 bushels, valued at \$17,201,280. Oats, 1,358,119 acres, producing 39,793,000 bushels, valued at \$10,346,185. All other field crops amounting to a value approximating \$200,00,000, or in round numbers, Missouri produced in 1887 from field crops a value approximating \$100,000,000.

On January 1st, 1888, Missouri had 782,124 head of horses, valued at \$45,040,996; 225,563 head of mules, valued at \$15,019,534; milch cows, 737,259 head, valued at \$14,344,215; oxen and other cattle, 1,429,453 head, valued at \$26,077,367; sheep, 1,087,690 head, valued at \$1,894,973; hogs, 3,798,799 head, valued at 15,043,246. Total value of live stock, \$117,420,331.

The total value of farms, farm animals and farm products of Missouri January 1st, 1888, amounts to \$572,752,228.

Such vast resources deserve competitive seaboard markets, and is one good argument for the establishment of a deep harbor on the Texas Gulf Coast, and is there any wonder Missouri joins the progressive movement with Colorado and the Great West in demanding of Congress appropriations for commerce that directly affects two-thirds of the area of this glorious Republic. Colorado has a great many native Missourians within her borders; in fact. Colorado is mainly peopled with immigrants from the older States of the Union. from the progressive, energetic portion of the population of America. While the resources of this great State are similar to the products of Colorado, our interests are common, and together we pull for the main interest—Deep Harbors on the Texas Gulf coast.

Missouri is represented on the Inter-State Deep Harbor Committee by Hon. D. H. Armstrong, vice-president, St. Louis, Mo.; Hon. A. L. Tomblin, Stanberry, Mo.; Col. H. F. Fellows, Springfield Mo.; Hon. J. S. Logan, St. Joseph, Mo., and Hon. W. W. Anderson, Louisiana, Mo.



Chairman Arkansas Contingent of Inter-State Deep Harbor  
Committee.

*Timothy Sorells*





## CHAPTER IV.

## ARKANSAS—1680 TO 1889.

**A**RKANSAS was the third State west of the Mississippi River to be admitted into the Union. It formed a portion of the original Territory of Louisiana; later Territory of New Orleans; later Territory of Missouri; and after the admission of Missouri into the Union, became a Territory by the name of Arkansas, which then included the State of Arkansas and the present Indian Territory, and was included within the original purchase from France by the United States in 1803. The State is 240 miles in length, by an average breadth of 225 miles, containing an area of 53,850 square miles, being about the size of England proper, or an equivalent of 33,406,720 acres. This portion of the original Louisiana was nominally colonized in 1680 by the French at the junction of the St. Francis River with the Mississippi; but in fact, it was little better than a wilderness at the time of the purchase by the United States in 1803. It became a Territory March 2nd, 1819, named after the principal river, the Arkansas, which is navigable throughout its entire course in the State. It flows from near the northwest to near the southeast corner of the State, where it empties into the Mississippi River, which river flows from the north to the south along the entire eastern border. The other rivers in the State are St. Francis, White, Big Black, Washita and Saline, all more or less navigable. Nearly all of the counties of the State are either bordered or traversed by navigable streams, and probably no other area in the world, not surrounded by an ocean, of equal dimensions with Arkansas, has one-half of the natural commercial ways enjoyed by this State. The state is well watered but has no lakes worthy of name.

The surface is, in the eastern portion along the Mississippi, very low and flat, subject to overflow, and very swampy; while the north and west portions are rolling, often terminating in small mountains reaching an elevation of two thousand to three thousand feet.

The climate is exceptionally salubrious in the western portion and malarial in the eastern counties. Vegetation is prolific. Yellow fever has never been epidemic in Arkansas, which often devastates the states to the east just across the Mississippi River.

The State abounds in valuable timber, there being large forests of cypress, oak, pine, red cedar, black walnut, locust, maple and mulberry trees. Besides these are grown beech, sycamore, ash, elm, hickory, laurel, juniper, ironwood, palmetto, holly, butternut, scrub oak, etc. All fruits common to the latitudes of 33° to 36° grow in abundance.

Game is still very abundant in some portions of the state, such as deer, bear, quail, prairie chicken and wild turkey.

The streams afford an abundance of fish, while alligators are occasionally encountered in the bayous.

Arkansas has fewer miles of railroad than any of her western sisters. That, however, is overbalanced by her excellent natural channels of commerce.

The Territory had in 1820 only 14,273 inhabitants. The number increased gradually, and March 1st, 1836, a State Constitution was formed, and the State admitted into the Union June 15th of the same year. The State is bounded on the west by the Indian Territory and Texas, on the south by Louisiana, on the east by Mississippi and Tennessee, on the north by Missouri.

Arkansas is not known for its precious metals; however, there appears to be some considerable mineral found there carrying 70 per cent. lead, and as high as 50 ounces silver per ton. Experience has not been such as to encourage mining for metals in the State. An inferior quality of coal underlies about 8,000,000 acres. It is mined for domestic use only, as it is regarded unfit for commercial uses.

Arkansas produced in 1886, 42,140,000 bushels corn, valued at \$20,648,600, on 2,069,176 acres of land; wheat, 231,357 acres produced 1,815,000 bushels, valued at \$1,542,750; oats, 263,848 acres, produced 4,749,000 bushels, valued at \$1,994,580; other field crops, exclusive of cotton, 5,875 acres, produced crops valued at \$1,091,748; cotton, 1,354,788 acres, produced 660,872 bales, valued at \$26,662,228; a total agricultural product, exclusive of farm animals, valued at \$51,939,906.

Arkansas had January 1st, 1888, 179,055 head of horses, valued at \$10,678,480; 122,457 head of mules, valued at \$9,063,660; 304,404 head of milch cows, valued at \$4,453,431; 469,057 head of oxen and other cattle, valued at \$4,603,415; 220,167 head of sheep, valued at \$310,127; 1,538,560 head of swine, valued at \$3,938,202; or a total valuation, exclusive of farm lands, approximating \$100,000,000 January 1st, 1889

Arkansas is noted for its world-renowned hot springs at the city of that name. There are fifty to sixty mineral or medicinal springs at Hot Springs, varying in temperature from 93 to 148 degrees, strongly impregnated with carbonates and carbonic acid, and are famous for the benefits afforded to thousands of invalids who annually visit there.

The greater portion of the arable lands of the State are directly tributary to the proposed Texas Deep Harbors, and consequently the State takes a deep interest in the Deep Harbor movement, such distinguished citizens of Arkansas are prominently identified with the movement, viz: Judge T. F. Sorrells, Judge William Fishback, Governor Simon P. Hughes, Hon. J. W. T. Tiller, and Hon. William M. Duffy. They are members of the Inter-State Deep Harbor Committee.

## CHAPTER V.

## IOWA—1788 TO 1876.

IOWA was included within the original Territory of Louisiana, purchased from the French by the United States in 1803. The first white settlement within the present limits of the State was effected in 1788 by Julian Dubuque, a French Canadian, at a point on the Mississippi River, now occupied by the city of Dubuque, so named in honor of its first founder, who, in about the year 1790, erected a fort to defend his possessions granted him by the Spanish crown in the year 1788. The grant was a large tract of land, and included the city now bearing his name.

Iowa lies midway between the Atlantic and Pacific oceans, and in the latitude of greatest migration it is as near as any State of the Union can be the geographical centre of the United States. It is drained by two great rivers—the Mississippi on its eastern border, and the Missouri on its western border. It is bounded by the great States of the American Union, Wisconsin and Illinois on the east, Minnesota on the north, Nebraska on the west, and Missouri on the south.

The State is the most purely agricultural of all the United States. Lead was at one time quite extensively mined near Dubuque, and was the direct cause of the settlement there of Julian Dubuque in 1788; he mined the lead and traded with the Indians until his death in 1810.

In 1833 a small settlement was established by Illinoisans near where Burlington now stands, and thereafter the eastern portion of the State was rapidly settled until the war of the rebellion broke out, when immigration was checked for about four years, after which an unprecedented rush for farms in Iowa was made by sturdy eastern farmers. Following close upon the heels of the farmer came the business man and manufacturer, and although almost purely agricultural, Iowa is a State of wonderfully diversified interests, never tending, however, to build large cities. Moderate sized cities are scattered throughout the State, while on the two great rivers forming the eastern and western border are such magnificent commercial centers as Keokuk, Fort Madison, Burlington, Muscatine, Davenport, Clinton, Bellevue, Dubuque, Sioux City, and Council Bluffs.

Notwithstanding Dubuque was the first settler, as early as 1673 whites had explored the country. The aboriginal owners of this lovely region, in their appreciation of its beauty, fertility and location, bestowed upon it the very appropriate name of Iowa, signifying in their language, "The beautiful land." The first Europeans who trod the soil



of Iowa were two zealous French Jesuits, of Canada, James Marquette and Louis Joliet, who had heard from the tribes of the northwest, assembled in council, of the noble river, on the banks of which they dwelt. Marquette and Joliet were stationed at the mission of St. Marys, the oldest settlement in the present State of Michigan. Marquette formed the purpose of discovering this great river, and the Indians who had gathered in large numbers to witness his departure, endeavored to dissuade him from his perilous journey, representing to him that the Indians of the Mississippi Valley were cruel, and would resent the intrusion of strangers into their domain. But he was not to be diverted from his purpose, and on May 13th, 1673, with Joliet and five French Canadian boatmen, he left the mission, and proceeding westward to the Wisconsin, they descended that river to the Mississippi, and on the 25th of June landed a little above the mouth of what is now the Des Moines River, where they remained six days with a part of the Illinois nation, and on their departure Marquette received from them the calumet, the emblem of peace and a safeguard among the nations. The first settlement of the whites in Iowa was made by Julien Dubuque, in 1788, who purchased from the Indians the land where the City of Dubuque now stands, and engaged in mining and trading at that place, where he died in 1810.

Although Marquette and Joliet in their exploration of the Mississippi River looked over the luxuriant border of Iowa as early as in 1673, yet the French and Spaniards left this country to the undisturbed possession of the aborigines. Even the enterprise of Julien Dubuque was not inaugurated until more than a century later.

When the United States came into possession of the Mississippi Valley, by the "Louisiana Purchase," the territory now comprising the State of Iowa was in the possession of the Sacs, Foxes and Iowas, with the savage and warlike Sioux Indians in the northern and western portions of the territory. After a long contest with these tribes under the leadership of the renowned Black Hawk, known in history as the "Black Hawk War," the treaty by which the whites at last obtained possession of Iowa was concluded at Rock Island, September 21st, 1832, and ratified February 13th, 1833, to take effect June 1st, 1833, when the Indians left the ceded territory known as the "Black Hawk Purchase," thus opening the way for its settlement by the white man.

The territory embraced within the limits of the State of Iowa was, as is well known, a part of the immense empire which France sold to the United States in 1803, and which had been previously for a time a part of the possessions of the crown of Spain, to which it was conveyed by France in the year 1763.

On the 31st of October, 1803, an act of Congress was approved, authorising the President to take possession of the newly-acquired territory, and provide for it a temporary government; and another act approved March 26th, 1804, authorized the division of the "Louisiana



Purchase," as it was then called, into two separate territories. All that portion south of the 33rd parallel of north latitude, was called the "Territory of Orleans," and that north of the said parallel was known as the "District of Louisiana," and was placed under the jurisdiction of what was then known as "Indian Territory."

On the 4th day of July, 1805, another change occurred, the district of Louisiana becoming on that day the "Territory of Louisiana." The legislative power was vested in the governor and three judges, to be appointed by the President and Senate, the former for three years, the latter for four. This government continued until the 7th day of December, 1812, when the Territory of Louisiana became the Territory of Missouri.

In 1819 a portion of this Territory was organized as "Arkansas Territory," and in 1821 the State of Missouri was admitted, being a part of the former Territory of Missouri.

The admission of Missouri carried with it the abolition of the Territory of Missouri. All that part of the latter not included within the limits of the State of Missouri, was therefore left without civil government, and remained in that condition until June 28th, 1834, when the portion east of the Missouri and White Earth Rivers, which limits included all of the present Wisconsin, Iowa and Minnesota, and most of the Territory of Dakota, became a part of the Territory of Michigan.

In July, 1836, the territory embracing the present States of Iowa, Minnesota and Wisconsin was detached from Michigan, and organized with a separate territorial government under the name of "Wisconsin Territory."

By virtue of an act of Congress, approved June 12th, 1838, on the 3rd of July, of the same year, the Territory of Iowa was constituted. It embraced the present State of Iowa, and the greater portion of what is now the State of Minnesota. Robert Lucas, who had been one of the early Governors of Ohio, was appointed the first Territorial Governor, and William B. Conway, secretary. The latter died during his term of office, in November, 1839, and James Clarke was appointed to the vacancy. The first Legislative Assembly convened at Burlington, November 12th, 1838. That place continued as the seat of the Territorial Government until the Fourth Legislative Assembly, which convened at Iowa City, December 6th, 1841. The latter place continued as the capital of the territory and state until the permanent location at Des Moines, in 1857.

On the 17th of January, 1846, the Legislative Assembly passed an act providing directly for an election, in April following, of delegates to a constitutional convention. The convention thus provided for met at Iowa City on the 4th day of May following, and formed a constitution with the present boundaries of the state, which had meantime been proposed in Congress. This constitution was adopted by the

people August 3rd, 1846, by 9,492 affirmative votes against 9,036 negative votes. Governor Clarke, by proclamation, called an election of state officers for October 26th, 1846. On that day Ansel Briggs, of the county of Jackson, was elected Governor, Elisha Cutler, jr., Secretary of State, Joseph T. Fales, Auditor of Public Accounts, and Morgan Reno Treasurer. These officers entered upon their respective duties December following.

On the 28th of December, A. D. 1846, Iowa was admitted into the Union as the twenty-ninth state.

It is a matter of some interest to glance at the various changes of ownership and jurisdiction through which it has passed.

It belonged to France, with other territory now belonging to our national domain.

In 1763, with other territory, it was ceded to Spain.

October 1st, 1800, it was ceded, with other territory, from Spain back to France.

April 30th, 1803, it was ceded, with other territory, by France to the United States.

October 31st, 1803, a temporary government was authorized by Congress for the newly acquired territory.

October 1st, 1804, it was included in the District of Louisiana, and placed under the jurisdiction of the Territorial Government of Indiana.

July 4th, 1805, it was included as a part of the Territory of Louisiana, then organized with a separate Territorial Government.

June 4th, 1812, it was embraced in what was then made the Territory of Missouri.

June 28th, 1834, it became part of the Territory of Michigan.

July 3rd, 1836, it was included as a part of the newly organized Territory of Wisconsin.

June 12th, 1838, it was included in and constituted a part of the newly organized Territory of Iowa.

December 28th, 1846, it was admitted into the Union as a State.

Among the first important matters demanding attention at the first session of the Iowa Territorial Legislature, was the location of the seat of government, and provision for the erection of public buildings, for which Congress had appropriated \$20,000. Governor Lucas, in his message, had recommended the appointment of commissioners, with a view to making a central location. The extent of the future State of Iowa was not known or thought of. Only on a strip of land fifty miles wide, bordering on the Mississippi River, was the Indian title extinguished, and a central location meant some central point in the Black Hawk Purchase, and on the 21st day of January, 1839, an act was passed appointing Chauncey Swan, of Dubuque county; John Ronalds, of Louisa county, and Robert Ralston, of Des Moines county, Commissioners, to select a site for a permanent seat of government within the limits of Johnson county.

Johnson county had been created by act of the Territorial Legislature of Wisconsin, approved December 21st, 1837, and organized by act passed at the special session at Burlington in June, 1838, the organization to date from July 4th following, and was, from north to south, in the geographical center of this purchase, and as near the east and west geographical center of the future State of Iowa as then could be made, as the boundary line between the lands of the United States and the Indians, established by the treaty of October 21st, 1837, was immediately west of the county limits.

The commissioners, after selecting the site were directed to lay out 640 acres into a town, to be called Iowa City, and to proceed to sell lots and erect public buildings thereon, Congress having granted a section of land to be selected by the territory for this purpose. The commissioners met at Napoleon, Johnson county, May 1st, 1839, selected a site, section 10, in township 79 north of range 6 west of the Fifth Principal Meridian, and immediately surveyed it and laid off the town. The first sale of lots took place August 16th, 1839. The site selected for the public buildings was a little west of the geographical center of the section, where a square of ten acres on the elevated grounds overlooking the river was reserved for this purpose. The capitol was located in the center of the square.

On Monday, December 6th, 1841, the Fourth Legislative Assembly met at the new capitol, Iowa City, but the capitol building could not be used, and the legislature occupied a temporary frame house that had been erected for that purpose during the session of 1841-2.

By an act of the Territorial Legislature of Iowa, approved February 12th, 1844, the question of the formation of a State Constitution and providing for the election of delegates to a convention to be convened for that purpose, was submitted to the people, to be voted upon at their township elections in April following. The vote was largely in favor of the measure, and the delegates elected assembled in convention at Iowa City on the 7th of October, 1844. On the 1st day of November following, the convention completed its work and adopted the first state constitution.

The constitution adopted by this convention was rejected by the people at an election held in April, 1845, and also at one held on the 4th day of August, 1845, there being at the latter 7,235 votes cast "for the constitution," and 7,656 votes cast "against the constitution."

A second constitutional convention assembled at Iowa City on the 4th day of May, 1846, and on the 18th day of the same month another constitution for the new state with the present boundaries was adopted, and submitted to the people for ratification on the 3rd day of August following, when it was accepted.

The constitution was approved by Congress, and by act of Congress approved December 28th, 1846, Iowa was admitted as a sovereign state in the American Union.



The first General Assembly of the State of Iowa was composed of nineteen senators and forty representatives. It assembled at Iowa City November 30th, 1846, about a month before the state was admitted into the Union.

At the first session also arose the question of the re-location of the capital. The western boundary of the state, as now determined, left Iowa City too far toward the eastern and southern boundary of the state; this was conceded. Congress had appropriated five sections of land for the erection of public buildings, and toward the close of the session a bill was introduced providing for the re-location of the seat of government, involving to some extent the location of the state university, which had already been discussed. It provided for the appointment of three commissioners, who were authorized to make a location as near the geographical center of the state as a healthy and eligible site could be obtained; to select the five sections of land donated by Congress; to survey and plat into town lots not exceeding one section of land so selected; to sell lots at public sale, not to exceed two in each block. Having done this, they were then required to suspend further operations, and make a report of their proceedings to the Governor. The bill passed both houses by decisive votes, received the signature of the Governor, and became a law, and in 1851 bills were introduced for the removal of the capital to Pella and to Fort Des Moines. The latter appeared to have the support of the majority, but was finally lost in the House on the question of ordering it to its third reading.

On the 15th day of January, 1855, a bill re-locating the capital within two miles of the Raccoon Fork of the Des Moines, and for the appointment of commissioners, was approved by Gov. Grimes. The site was selected in 1856, in accordance with the provisions of this act, the land being donated to the state by citizens and property holders of Des Moines.

Gov. B. R. Sherman says of the state: "The Iowa of to-day is a very empire, the joy of every citizen, and containing within itself all the essential elements of political and personal greatness, which needs only the watchful and liberal care of the state to make it the realization of the hopes of the most sanguine of its people. Our growth in population and development, in resources and possibilities, has been without parallel, and it is not too much to say that our people have been exceptional in prosperity, as unrivalled in business energies. Our prairies, so lately a wilderness, are teeming with a population unusually intelligent and industrious, being constantly added to from the over crowded East; and in the near future the many thousands of untilled acres, fertile beyond description, and only awaiting the touch of the husbandman, shall be made to laugh in abundant harvests, alike the joy and profit of the hardy pioneer. The products of our soil, yielding in such wonderful abundance, are sent to the uttermost parts



of the globe to make glad the inhabitants of earth, and our very name has finally become the synonym for superiority and plenteousness, and the enterprise of the people has accomplished results none the less astonishing to ourselves than a marvel to the nation."

Iowa is by actual United States statistics the richest agricultural state in the Union, and has twice the agricultural resources of all the New England States combined, and in surplus products equal to the New England and Middle States combined.

Iowa, in 1886, produced 198,847,000 bushels of corn on 7,927,019 acres, valued at \$59,654,100; wheat, 2,657,105 acres producing 32,455,000 bushels, valued at \$19,473,000; oats, 2,298,752 acres, producing 78,454,000 bushels, valued at \$18,044,420; hay, 3,673,875 acres, producing 4,137,844 tons, valued at \$20,689,220; other field crops, 514,125 acres, product valued at \$6,690,520; a total of field products amounting to \$124,551,260.

January 1st, 1888, Iowa had 1,003,022 head of horses, valued at \$74,032,082; mules, 45,649 head, valued at \$3,936,540; milch cows, 1,255,432 head, valued at \$29,251,566; oxen and other cattle, 2,095,253 head, valued at \$42,633,795; sheep, 408,478 head, valued at \$985,249; hogs, 4,148,811 head, valued at \$27,969,624; a total valuation of live stock amounting to \$178,808,856, or twice the value of all the New England States combined, and unsurpassed by any state in the Union. Total farms cultivated in Iowa in 1888 amounted to 185,351; almost as many as all the New England States, where farms are cut up into such small acreage that a western farmer would call a garden patch. The surplus agricultural product of Iowa is simply enormous, and amounts to more than all of that of the New England and Middle States combined. In 1887 the agricultural product of Iowa was increased by about \$25,000,000 over that of 1886, while the product of the New England and Middle States was not materially advanced. Iowa's surplus product has been forced east by the force of circumstances which governs this great Western empire, viz: the dominating influence of the monopolistic transportation companies over the American Congress, which withholds a just proportion of public appropriations for the improvement of the water ways contiguous to the "Great West," such as harbor facilities on the Texas Gulf Coast. The day is dawning that will revolutionize the channels of exportation of the surplus grain products of America, and in consequence stimulate the industry and enhance values of farm products and farm properties of this Western empire. Iowa is deeply interested in the movement for Deep Harbors on the Texas Gulf Coast, and consequently have placed on the permanent committee to secure Deep Harbors, such able citizens as Hon. J. M. Pierce, Hon. A. P. Chamberlin, and Hon. D. W. Smith, of Des Moines; Hon. W. O. Kulp, of Davenport; and Hon. B. Zevely, of Council Bluffs.

## CHAPTER VI.

## TEXAS—1687 TO 1889.

La Salle, the French explorer, first settled Texas in 1687, erected a fort on Matagorda Bay, and spread the French flag to the gentle breezes. Without doubt this vast state was included within the French cessions to the United States in 1803, under the name of Louisiana.

France in 1670 ceded all the Territory of Louisiana, including Texas, to the Spanish Crown. The country was retroceded to France in 1800, and by France sold to the United States in 1803. Spain, however, claimed Texas as Spanish territory not included in the retrocession to France in 1800.

The United States made several unsuccessful attempts to wrest Texas from the Spaniards, between 1806 and 1816; in one battle in 1813 the American and Mexican loss amounted to 2,500 killed, while 700 citizens of San Antonio were massacred. In 1819 the Sabine River was established as the boundary.

In 1820, an American citizen, named Moses Austin, obtained from the Mexican government a grant of a large tract of land, and began a settlement which rapidly increased, but some were of such a lawless character that in 1830 the Mexican government forbade any more Americans coming into Texas.

In 1824, the Mexicans overthrew the tyrannical power of the Spaniards, and adopted a constitutional mode of government, recognized by every foreign power except Spain.

In 1833, a convention of settlers, then 2,000 strong, attempted to form an independent Mexican State; the attempt was unsuccessful.

In December 1835, a small gathering of Texans assembled and declared the independence of Mexico, and professed to have established the Republic of Texas. Santa Anna, the President of Mexico, at once prepared to invade Texas with an army of 7,000 men.

February 23rd, 1836, he with 4,000 men invested the Alamo at San. Antonio, garrisoned by 140 men, under the command of W. B. Travis; thirty-two other Texans forced their way through the Mexican lines and joined Travis; therefore Travis could muster but 172 men, with which force he defended the Alamo for eleven days, repulsing the Mexicans repeatedly, and killing 1,600 of the attacking force, while his own little band was reduced to a mere handful. On the 6th day of March, 1836, the Alamo fell into the hands of the Mexicans, all of its defenders were slain, only a woman, a child and servant being spared from the wholesale slaughter. They were concealed in a strong inner

room, and escaped the tremendous cannonade and musketry fire. Here the brave Davy Crocket fell surrounded by scores of dead Mexicans, slain by his own hand, while defending himself in the final assault.

General Sam Houston soon after succeeded in raising 800 picked men to repel the invaders. April 21st following he gave battle to twice the number of Mexicans headed by Santa Anna; the battle resulted in the total defeat of the Mexicans, who lost 630 in killed, 208 wounded, and 730 prisoners. Santa Anna escaped from the field, but was captured the following day. This decisive battle practically determined the independence of Texas, and a Republican form of government was at once adopted; General Sam Houston was chosen President and inaugurated October 22nd, 1836.

March, 1837, the United States acknowledged the independence of the Texas Republic, followed by the acknowledgment by France in 1839, and England, Holland and Belgium in 1840. Thus was the Republic firmly established.

In 1845, Texas was annexed to the United States by act of Congress in December in that year. Mexico had never acknowledged the independence of Texas, and an invading army started from the City of Mexico to invest the Texas Republic. The United States authorities proposed to hold by force of arms the new territory acquired by annexation, and the result was the Mexican war of 1846; it lasted into 1848, the Mexicans were defeated, and their capital fell into the hands of U. S. General Scott; peace was established, and Texas became one of the states of the American Union. It seceded with the other Southern States in 1861, and joined the war of the rebellion, and not until 1870 was the state re-admitted to the Union.

The physical features of Texas are its Gulf coast line, extending 800 miles from the mouth of the Sabine River, which separates the state from Louisiana, to the mouth of the Rio Grande River, which forms the boundary line between Texas and Mexico. From a low swampy coast on the Gulf, the surface gradually rises to 3,000 and even 5,000 feet above sea level in the northern portions of the Pan Handle, and quite mountainous in the northwestern portion, near the city of El Paso, and near San Antonio. The shore is protected by a chain of long narrow and flat islands from the severe Gulf storms. Large lakes or lagoons are formed between the islands and the main land, and form a safe refuge for small crafts, and in some instances they are deep and afford safe anchorage for large ocean-going vessels.

The islands are from 50 to 200 miles long. The channels connecting the lagoons with the Gulf are of variable depths, that at Galveston Island being of the greatest width and depth, the channel is over two miles wide and twelve feet deep at its greatest depth.

This channel has had millions of dollars expended upon it by the National Government in order that the channel may be narrowed and deepened upon the Eads plan of jetty system. The work is now in the



hands of a competent U. S. Engineer, Major Earnest, and progressing with as much success as the limited appropriations made by the National Congress will admit of.

The City of Galveston is situated on Galveston island, and is already a magnificent commercial city, deeply interested in the final success of the engineering skill of Major Earnest. Here is a magnificent roadstead capable of accommodating the commerce of the world; much cannot be said of the harbor as a refuge for distressed vessels in severe weather owing to the deep water being in the channel and not landlocked; while commodious, it could not be regarded a perfectly secure harbor. It will be necessary to construct two jetties, known as the North and South jetties, in order to control the channel as proposed, each of these jetties of solid stone work will be extended six miles to the deep water in the Gulf. The south jetty is nearly one-third completed; under most favorable circumstances, with ample appropriations the work could not be completed under three or four years; at the present rate this generation will scarcely enjoy the benefits of the proposed harbor, or for that matter, any of the proposed harbors of the Gulf coast.

At the mouth of the Sabine, similar work is being constructed by the Government, the general features being similar to Galveston; no city is there, however, and the commercial necessities do not compare.

At the mouth of the Brazos River, private capital has taken hold of the matter by permission of the government. The bill giving them permission to construct a harbor, also provides for payment by the National Government a stipulated sum per foot of depth obtained as the work progresses, until 24 feet of water is obtained, when final payment is made by the Government, and the harbor management reassumed by them. A great many persons believe that the friends of Brazos Point have solved the question of economical and speedy construction of harbors upon the Gulf coast. The friends of Aransas Pass also favor development by private capital in a manner similar to Brazos, and Congress will undoubtedly be called upon to pass a bill of similar tenor to enable private capital to improve Aransas Harbor and Pass.

Galveston friends and friends of Sabine professes to be satisfied with the National appropriation idea, but are divided upon the present system of appropriations in homeopathic doses. The true friends of either place are heartily in accord with the Inter-State Deep Harbor movement,\* while the enemies to progress and public interest are in favor of continuing the present long-drawn-out system which probably affords them place or profit as individuals. Aransas Pass, while very conspicuous as a prospective deep water port, has received but a few hundred thousand dollars from the National Government, and no continuous work has been performed at that point; unlike Galveston, the

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\*See Appendix for purposes and accomplishments of the Deep Harbor Committee.



harbor is land-locked, but limited in good depth and also limited in anchorage; the friends of this point claim, however, that the harbor is of sufficient capacity to hold safely all of the merchant marine that will ever traverse the Gulf, in addition to *all* of the American navy. (The latter is only a slur at our present navy, they have been so accustomed to speak slightingly of our navy that they cannot read the signs of the times, viz: The future American navy will be larger and more effective than any other single government on earth can produce).

We grant that Aransas Pass has more in her favor, naturally, to make a greater port than any other point on the Gulf coast, but in the same connection we must say that men of energy, enterprise, and strategy move the world and not conditions. Conditions do not make or build cities, it is individual and collective enterprise, and they are which conquer conditions, as evidenced by our great Chicago. Almost anywhere within twenty miles of Chicago's present site could have been builded a city with one half the difficulties to overcome that has marked the era of that magnificent metropolis. Was it conditions then that made Chicago? No, it was the man, and it will be man that makes Aransas, irrespective of conditions, or it will not be made at all. Macauber like, the friends of Aransas appear to be waiting for something to turn up.

Turning from the coast we follow the gradually rising and gently undulating prairie lands, except a few counties in the eastern portion famous for their pine; the state is purely agricultural and stock raising. Texas contains a greater area than any other state or territory of the United States, (except Alaska), 274,356 square miles, divided into 229 counties, some of which are larger than some two or three New England States combined.

The principal rivers of the state are the Red, Sabine, Trinity, Colorado and Grand, collectively supplying some 400 miles of navigable waters, all flowing southeast into the Gulf.

The principal cities are Galveston, San Antonio, Fort Worth, Dallas, Houston, Waco and Austin, the latter, the state capital. Galveston is the principal seaport, Houston is also a seaport city, reached by Galveston Bay and Buffalo Bayou; Houston is also a great railroad center. Dallas is a large wholesale point, only surpassed in the state by Fort Worth, which city claims to be the greatest railroad center in Texas, some thirteen roads centering or diverging from there. San Antonio is a winter resort, a "quaint old town" of great historical renown; here is the famed Alamo, and various other missions of the early days of the Montezumas.

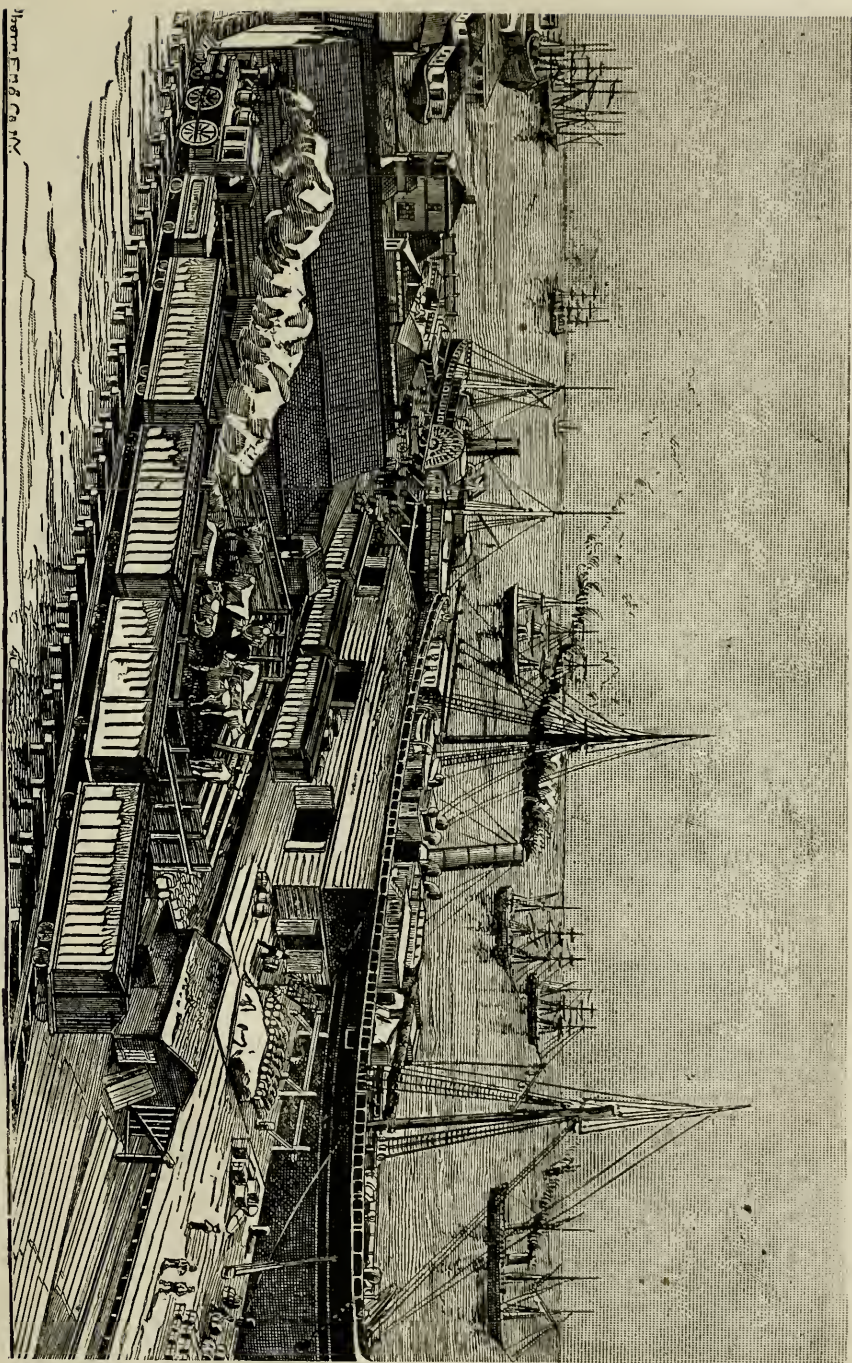
Texas produces every species of grain, vegetable or fruit known to agriculture, except bananas, oranges and pineapples, and they are raised to a very limited extent. Cotton is principally produced, Texas ranking first of all the United States. In wool, Texas is in the lead, in fact in all live stock and live stock products Texas leads the Union.

## PUBLIC SCHOOLS.

The public schools of Texas are rapidly approaching a degree of perfection that approaches the boasted New England systems, and as compared with other Southern States are vastly superior. The following facts gathered from reports of Hon. F. B. Chilton, Secretary of the Texas State Bureau of Immigration, and can be relied upon:

The permanent free school fund, invested in state and county bonds, is \$5,873,174.02; 40,000,000 acres of land controlled by the state, and four leagues, or 17,712 acres, to each county organized and unorganized, controlled by the counties, making a total of 47,288,676 acres, which at \$3 per acre would bring \$141,866,028, added to the above makes a grand total of \$147,739,202.02. The interest on the bonds and land notes for which school lands have been sold, rentals from the lands leased, one-third of the state tax, and one dollar on each poll, forms the available fund which is used each year for the maintenance of public free schools. The available fund is increasing rapidly each year. In 1881 the amount appropriated for maintenance of public free schools was \$103,933.44; in 1885 it was \$2,050,000; in 1887 it was \$2,285,415; a letter from the treasurer of the state says, the appropriation for 1888 will be about \$2,300,000. This fund will soon be sufficient to give free education to ten times as many children and persons as now live in Texas, between the ages of five and twenty years. We have a State University located at Austin, the capital, which is one of the best endowed educational institutions in the United States. It is open to both sexes; tuition free. The Constitution of the state provides for the establishment of a university for the education of colored youths; steps have been taken to put it in operation. The University lands will permanently endow these institutions, making them in time the equal of any in America. The University Permanent Fund is at present \$523,411, invested in bonds; this with an available fund of \$21,680, and cash on hand of \$10,825, makes a total University Fund of \$555,916. Besides this, it has 2,221,400 acres of land, most of which was located at an early day, and is very valuable, worth from \$3 to \$20 per acre. At an average of \$6 it would bring \$13,328,400, making a grand total of \$13,884,316 for university purposes. The State Agricultural and Mechanical College, located near the City of Bryan, Brazo County, is endowed with \$209,000, invested in bonds, also a large endowment from the United States Government. Ninety-four students, one-half of whom take a mechanical, and one-half an agricultural course, receive free board and tuition. The cost of board and tuition for other students is \$130 for the schoolastic year. The Sam Houston Normal School for the education of white teachers, and the Prairie View Normal School for the education of colored teachers, are supported by the state, and 155 white and 45 colored students receive tuition and board free, in proportion to white and colored population.





Thorn & Co. N.Y.

WHARF SCENE, GALVESTON, TEXAS.





Value of live stock . . . . .	\$150,500,000
“ stock shipped . . . . .	\$10,000,000
“ hides shipped, 1887 . . . . .	\$5,400,000
“ wool exported, 1887 . . . . .	\$1,600,000
“ free school fund, bonds and lands . . . . .	\$147,769,202
Available school fund, 1887 . . . . .	\$2,285,451
Probable fund for 1888 . . . . .	\$2,300,000
Value of State University fund, lands and bonds . . . . .	\$13,884,316
Available fund for 1887 . . . . .	\$32,505
Endowment fund of the State Agricultural and Mechanical College . . . . .	\$500,000
Value of Asylum lands . . . . .	\$12,000,000
Estimated value of railways . . . . .	\$215,600,000

While Mr. Chilton estimates the value of railways in the state at over \$200,000,000, it is a remarkable fact that no Texas railways have ever yet paid a dividend, accounted for probably in the marvelous amount of railroad extensions indulged in by the various railroads, and the vast mileage necessary to traverse the state, some of which must unavoidably pass through large stretches of unoccupied territory.

Texas is almost an empire within itself, and forms no small portion of the vast empire that stretches from the “Father of Waters” on the east, to the Pacific Ocean on the west. It is the key to the great treasure vaults of the Great West. The establishment of deep harbors on the Texas coast will open the door which will admit of the West; “the greater half of the continent” interchanging commerce with the world without the intervention and extortion of the east, and build up a Texas such as the early Texas fanatic never dreamed of, or the most sanguine of present sages ever conceived.

In size and resources Texas surpasses almost any European country, and the Great West collectively surpasses all of Europe combined.

## CHAPTER VII.

## CALIFORNIA—1542 TO 1889.

PRIOR to 1542 California was practically unknown, and the name, probably, originated through a Spanish romance, published in 1510, in which the author speaks of an island which he called California Island, a place where an abundance of gold and precious stones was to be found.

The Spaniards, the great explorers, fitted out a fleet in quest of the island of so much abundance, under the command of one Cabrillo, and in 1542 they coasted along what is known as California, as far north as Cape Mendocino, in 42 degrees north latitude. In 1579 Sir Francis Drake, in command of an English fleet, plundering Spanish commerce, coasted along California as far as 48 degrees north latitude and it is believed sailed into San Francisco bay to overhaul his vessels; he claimed the country in the name of England, and named it New Albion. The country, however, remained unoccupied, except by a few Jesuites, until 1767, when the Franciscan friars entered and occupied California, driving out the Jesuits with the aid of a proclamation of the King of Spain, backed by armed coadjutors. They succeeded in establishing various missions, succeeding in bringing under their sub-mission the mass of the aborigines, and prospered well until Mexico became independent (in 1822); that marked the turning point in the Franciscan rule, and their power gradually waned until 1840, when they were entirely broken up.

The Indians were treated by these missions as little better than slaves; they were, however, taught frugality, and prospered in a wordly way, intellectually they were very little aided by the missions. In all there were twenty-one missions, the first being established in 1769, the last in 1820. They were all well located, the priests having displayed excellent judgment in selecting the best garden spots for their settlements. The indian population was large, even up as late as the cession of California to the United States by Mexico in 1848. The mission indians numbering at that time about 30,000. In 1880 there were but 11,630 indians in the entire state.

Just prior to the United States coming into possession of California, there was great rivalry between England, France and the United States over this Mexican possession, and in 1842, Commodore Jones, of the American navy, captured the fort at Monterey, and raised the stars and stripes; the next morning, however, he hauled down his flag

and made satisfactory apology for the mistake. Both European countries were charged with attempting to wrest this country from Mexico; such a thing the United States would not tolerate. The result being that when war was declared with Mexico by the United States, that General Fremont, who had been upon a scientific investigation on the Pacific coast, abandoned his explorations in May, 1846, and made his way to Sonoma, where he organized a battalion of mounted riflemen, and on the 5th day of July recommended a declaration of independence. Commodore Sloat, on a United States frigate, put in at Monterey on July 2nd, and on the morning of the 7th, invested and took possession of the fort, and hoisted the stars and stripes, with no intention of imitating Commodore Jones' example, by hauling them down again. He immediately issued a proclamation declaring California to be a part of the United States. General Fremont in obeying the orders of Commodore Stockton, (who had succeeded Sloat), instead of those of General Kearney, who ranked the Commodore, and assumed command, got himself into trouble and was court-martialed, found guilty of "mutiny and disobedience." The President rejected the finding as to mutiny, and remitted the penalty on the other count, but General Fremont refused the clemency and resigned. He afterwards conducted several successful expeditions overland to California, and served the government most faithfully in his explorations in the Rocky Mountains, and he is regarded almost universally as the conqueror of the territory.

At the close of the war with Mexico California was ceded to the United States in the treaty of peace ratified May 19th, 1848, and immediately the question came up whether it should be admitted to the Union as a free or a slave state. Congress adjourned March 4th, 1849, without settling the question, or even forming a territorial government. San Francisco was, however, made a port of entry and the customs laws were extended over the country.

Meanwhile, in 1848, gold had been discovered, and a grand rush had been made to the new Eldorado; the population had increased rapidly, the matchless harbor at San Francisco had attracted the commerce of every nation, presenting a centre of attraction for the restless and energetic of every race and clime.

September, 1849, the people held a convention, which framed a State Constitution, in which slavery was expressly forbidden.

September 7th, 1850, congress passed a bill admitting California as a free state, but as a compromise left New Mexico and Utah, (organized on the same day as territories), open to its introduction. The gold excitement was now at its height. fortunes were made in a day, and a constant stream of gold flowed eastward, intensifying the excitement. Speculation ran rife, and property in San Francisco was held at fabulous prices; lots were worth gold coin enough to carpet them; all forms of gambling were regarded as legitimate business; adventurers and crimi-



nals flocked in, and society was in a chaotic state. Self-preservation being the first law of nature, order became necessary, which could only be enforced by stringent measures, and was the direct cause of the formation of the celebrated vigilance committee, which soon assumed the proportions of a regular government, and successfully resisted the state authorities up to 1856, when they formally resigned, after having hanged several and driven hundreds of the worst characters from the state. The vigilantes held their courts and pronounced judgment which was speedily executed, while their judgment was often severe, it has never been charged that injustice was done, while such methods are to be deplored, the exigencies of the times demanded speedy justice and a general fear of the consequences of sin.

California is one of the largest states of the Union, being 750 miles long by an average of 200 in width, containing 155,980 square miles. The state is blessed with several fine harbors, the best being at San Francisco; the others at San Diego, Humboldt, Santa Barbara, Monterey, Bodega, San Luis, Obispo and Tomales; the first named being the best harbor on the Pacific coast, if not the best in the world. The bay is completely land-locked and of ample room to float the combined navies of the world.

California has but two prominent rivers, the Sacramento and the San Joaquin, both empty into San Francisco Bay, one from the north-east and the other from the southeast, both are navigable for considerable distance. There are two great mountain chains in the state, the Sierra Nevada and coast range. The state is interspersed with mountains and large fertile valleys. The principal mountain peaks are Shastar Tyndall, Brewer and Dana, ranging in height from 13,000 to 14,500 feet. The valleys have the appearance of having been at one time immense lakes that would compare with Lakes Superior and Michigan, having been drained into the ocean, left a rich sediment which accounts probably for the remarkable fertility of these valleys. The state is noted for its wonderful scenery, especially that in the great Yosemite valley, which is world renowned. The valley is about 150 miles southeast of San Francisco, at an elevation of 4,000 feet above sea level, in the center of the Serra Nevada mountains, hemmed in by almost perpendicular walls or cliffs, from 2,000 to 3,000 feet high. The great falls of Yosemite creek are the most wonderful in the world; the creek falls 2,600 feet in three leaps, the highest being 1,500 feet. Mt. Dana, which towers above and dominates the Yosemite valley, is over 13,000 feet high, and is easily ascended; from its summit a magnificent panorama of the Sierra Nevada range and Yosemite valley is obtainable. "The big trees" also attract much attention; these giants of the forest may be seen in groups, the most important being near Visalia. The common name for these trees is giant red wood; they vary in height from 100 feet to 400 feet, and in circumference at five feet from the ground, varying from 25 to more than 100 feet; one now



standing measures 104 feet in circumference, and 376 feet in height, remains of fallen trees indicate that much larger trees have grown there. The other native species of timber are pines in large variety, black oak, ash, hickory, elm, beech, white cedar, spruce, fir, laurel, tamarack, cypress, yew, juniper, chestnut, acacia, poplar, cottonwood, walnut, maple, buckeye, and innumerable varieties of shrubs, the most remarkable being the "chaparral."

The wild animals of California are varied and quite extensive, although they are being gradually exterminated, especially those animals valuable for their fur or flesh.

The largest and fiercest of the animals of this state—the grizzly bear—is now almost extinct; next comes the black, brown and cinnamon bears, followed by the less harmful wolves, badgers, coyotes, foxes, wild cats, otter, beaver, gopher, skunks, martins, weasels, elk, deer, rabbits and other minor animals, probably the most attractive of all California animals is the sea lion, which frequents seal rock at Golden Gate in countless numbers, whose noise and gambols attract thousands of sight seers daily. Birds of every variety, indigenous to the varied climate, are in great abundance, the California quail and sage hen being remarkable for plumage and food qualities, other species being not unlike those found all over the Western States.

Fish in great abundance and variety are found in the rivers, bays and in the ocean, and their catch and preservation form the important industries of the state.

The precious metals are all found in the Sierra Nevada mountains in the northeast portion of the state, gold being the most prominent and found in greater abundance than in any other field in the world, the average annual output for thirty years being upwards of \$20,000,000, approximating in the thirty years nearly \$1,000,000,000. It is mined principally by placers, although some good quartz lodes have been discovered and worked. Quicksilver is largely used in placer mining, and is found near at hand in great abundance, and one mine has yielded as high as 3,500,000 lbs. quicksilver per annum, and is the largest mine of the kind in the world.

The volcanic character of California is manifest in the formation of the mountains, and there are occasionally earthquakes now of more or less violence, upheaving and cracking the ground. In consequence of this uncertainty, the traveler will see that the great majority of houses in California are of frame, or if of stone the foundation and upper walls are of unusual width and strength.

The state boasts of a very superior climate, the leading feature being the remarkable uniformity of temperature, the mean summer temperature of San Francisco is 60 degrees, and mean winter temperature 51 degrees; there are but two seasons, the dry and rainy, corresponding with the eastern summer and winter, the dry season being from May to November, and the rainy season from November to April.

Not much more than one-third of the state is adapted to agriculture, and only about one-half of that is being cultivated. In 1886 California had 3,104,640 acres of wheat, producing 36,165,000 bushels, valued at \$26,400,450; 722,450 acres of barley, producing 16,038,000 bushels, valued at \$10,424,700; hay, 967,479 acres, producing 1,296,234 tons, valued at \$10,564,307; other crops, 328,489 acres, producing crops valued at \$7,076,300; a total value of crops amounting to \$54,465,757.

January 1st, 1888, the state contained 345,828 head of horses and mules, valued at \$25,098,644; 250,773 head of milch cows, valued at \$8,275,509; oxen and other cattle, 692,267 head, valued at \$14,194,447; sheep, 5,462,728 head, valued at \$10,291,779; hogs, 1,047,842 head, valued at \$4,836,000; or a total of 7,799,438 head of live stock, valued at \$62,696,379, or a grand total of farm products amounting to \$117,166,136.

California abounds in fruit, and especially excels in oranges, peaches, apricots and grapes, which fruit is shipped in large quantities either green, dried, canned or in juice wine, etc.; the total value of which forms no small proportion of the state's farm product, and would place the entire product well on to \$200,000,000.

The principal commercial cities of the state are San Francisco, Sacramento, Los Angeles and San Diego.

While California has not yet entered very actively into the movement for deep harbors on the Texas Gulf coast, yet there interests are identical with all of "The Great West," and in a short time they will add their influence to build up a western commercial Congress that will shake the nation, and insure recognition from the great National Congress at Washington. California has received almost her proportion of national appropriations, owing to the intimate commercial relations San Francisco has ever had to the great City of New York, these relations are being gradually shifted to a nearer and dearer relationship which is springing up in this grand Western Empire, to which San Francisco is destined to be what New York has been heretofore to the entire Union, dividing honors only with the Gulf port.

## CHAPTER VIII.

## MINNESOTA—1680 TO 1889.

WHILE Minnesota lays on both sides of the Mississippi, which river finds its source in the north central portion of the state, it is usually and in this history rated as Trans-Mississippi, or a portion of "The Great West."

It was first explored as far north as St. Anthony's Falls in 1680, by French fur traders, and the falls received their name by a Franciscan Priest named Louis Hennepin, after whom the county in which Minneapolis is situated was named. The French succeeded in establishing several fur trading stations in Minnesota about that time; the settlement of the state, however, did not commence until 1845. England became possessor of this portion of North America in 1763, the French having in that year ceded it to Great Britain.

The United States came into possession of this territory at the conclusion of the Revolutionary War in 1783, and was included in what was then termed the Northwest Territory, and which included Wisconsin and Illinois. In 1820, Fort Snelling was built, and two years later a mill was erected at St. Anthony Falls, where Minneapolis now stands. In 1823, the first steamboat ascended the river to St. Anthony Falls, and about the year 1830 a small Swiss colony settled near where St. Paul now is. In 1838 the Indian title to the lands east of the Mississippi River were extinguished, and in 1842 a settlement was effected at Stillwater.

The territory of Minnesota was organized by Act of Congress in 1849, the territory then containing 5,000 white population. Soon after the Indian title to the lands between the Mississippi and Red River of the North was extinguished, barring a few small reservations, the settlement of the territory then began in earnest, immigration being so rapid that Congress, in 1857, opened a way for the territory's admission into the Union, which was immediately acted upon by the people, and on May 11th, 1858, the state was admitted, and rapid progress was made in population, wealth and intelligence.

The boundaries of the state as established by the Act of Admission included 83,531 square miles, one-third of which is valuable timber land, including all varieties of deciduous trees found anywhere in the northern states, including valuable pine forests.

The state contains innumerable lakes of more or less importance, in fact about one-thirtieth part of the state's surface is covered with



water; the most important lake being Minnetonka lake, near Minneapolis, and White Bear lake, near St. Paul. The state contains several rivers, the most important being the Mississippi, Red river of the North, Minnesota and St. Croix, all of which are more or less navigable, there being within the state 1,350 miles of navigable streams. The waters of the state flow south into the Gulf, east into the great lakes, and north into Hudson Bay, the great divide being in the northwest portion of the state; this divide, the highest portion of which is a table land at an elevation of 1,680 feet, but not more than 100 feet above the surrounding country, nothing resembling mountains in the state. The streams have an unusual fall, and often flow over precipitous places, making waterfalls of such importance as to supply the state with abundant water power, the principal of which is situated at Minneapolis (St. Anthony Falls), where the largest flour mills in the world are situated, the combined output of which aggregate over 3,000 barrels per day.

Minnesota ranks well in the front of agricultural states of the Union. Spring wheat is the principal cereal, and in that commodity the state excels all others, and likewise in oats, excepting Iowa.

In 1886 the state produced 19,905,000 bushels of corn from 668,380 acres, product valued at \$6,767,700 from 3,067,851 acres; 42,856,000 bushels of wheat, valued at \$26,142,160, from 1,184,032 acres; 40,735,000 bushels of oats, valued at \$10,183,750, from 367,601 acres; 8,455,000 bushels of barley, valued at \$3,551,100, from 480,000 acres; 600,000 tons of hay, valued at \$2,820,000, from 63,161 acres; 5,306,000 bushels of potatoes, valued at \$1,963,220; other field crops, 39,374 acres, product valued at \$246,480; or a total value of field crops amounting to \$51,674,410.

January 1st, 1888, the state contained 390,458 head of horses and mules, valued at \$32,479,714; 433,966 head of milch cows, valued at \$10,306,693; 489,886 head of oxen and other cattle, valued at \$9,974,076; 283,725 head of sheep, valued at \$674,698; 549,793 head of hogs, valued at \$3,254,775; a total of 1,947,828 head of live stock, valued at \$56,689,956; or a grand total of farm products valued at \$107,264,366.

Minnesota is also regarded as a health resort notwithstanding the long cold winters. The atmosphere is dry and bracing and the cold equitable. The summers are delightful, warm days and cool nights, and attract thousands of tourists during that season. Lake Minnetonka has become a very popular summer resort, and there are several very large and comfortable hotels situated about the lake where every creature comfort is supplied. Several excursion steamers ply about the lake for the accommodation of visitors, besides numerous sailing crafts and row boats.

The lake is reached by a moter line from Minneapolis, likewise

by the popular St. Paul, Minneapolis & Manitoba Railway which connects St. Paul and Minneapolis with this beautiful lake.

The school facilities of this state are unsurpassed by any. There are public schools and colleges adequate for the rapidly increasing population, where a finished education may be had which vies with the great institutions of learning in the Eastern States. Society is of the very best and highly refined.

The principal cities are St. Paul, (the Capital), Minneapolis, Winona, Red Wing, Duluth and Fergus Falls. The state is well provided with railroad facilities, the principal lines being the St. P. M. & M., C. B. & Q., C. M. & St. P., C. & N. W., N. P. St. P. & D., and the C., St. P., M. & O. railways.

Minnesota is awakening to the importance of the movement for deep harbors on the Gulf coast. Gov. McGill, in his last biennial message to the Legislature of that state, recommended the appropriation of at least \$1,000 dollars to aid in the agitation. As yet no representation of that state has been had on the permanent Standing Committee, known as the "Inter-State Deep Harbor Committee;" we are assured, however, that they are with us, and will ere long have their full quota of representation on the committee which is fast assuming the importance of a Western Commercial Congress.

## CHAPTER IX.

## OREGON—1592 TO 1889.

**O**REGON at one time embraced all that portion of the United States north of California and west of the main range of the Rocky Mountains, including a portion of Idaho Territory, and all of the present State of Oregon, and the lately admitted State of Washington. The coast of Oregon was first discovered by De Fuca, a Greek navigator, no claim, however, was made to the country until the Spanish Admiral Fonte, in 1640, coasted along the west coast of America in the interests of Spain, which country she pretended to claim as Spanish territory until 1790, when she ceded to England, by treaty, any rights she might have to that portion of America. Notwithstanding several explorers had coasted along the entire west coast of America, the discovery of that noble stream, the Columbia River, was made by an American navigator, from Boston, Captain Robert Gray, who commanded the merchant ship "Columbia." Captain Gray had sailed past the mouth of the Columbia River twice on his trading voyages; the first time in 1789, without discovering the river, and the second time in June, 1791, at which time he marked the location of what he believed to be a large river; he did not sail in, however, owing to the surf which broke with violence across the mouth of the stream. Soon after he encountered Captain George Vancouver, of the English Navy, to whom he related his discovery. Vancouver, however, scouted the idea, as he had searched the whole coast, trying to find such a stream, and believed it was impossible that he could have missed it. Captain Gray soon parted with Vancouver and sailed south, hoping to effect an entrance to the river that he was certain he had discovered; he soon sighted the mouth of the river, (May, 1792), and with all sails set he steered the "Columbia" boldly for it, and safely ran in between the breakers into a basin where no other sail had ever been; he continued his course up the river some fifteen or twenty miles, followed by a swarm of canoes filled with curious natives.

The anchor being let go, Captain Gray found himself floating on the peaceful bosom of a fresh water river, which he named Columbia, after his noble ship. This river's existence had been surmised for some years previous, and the phantom river was called the Oregon, after the country through which it was supposed to flow.

Captain Gray made a report to the United States Government of the discovery he had made, and it was a basis upon which the Govern-



ment claimed the valley of the river. France had likewise a shadowy claim to all that portion of North America west of the Mississippi River, and north of the Spanish possessions, under the name of Louisiana, all of which the United States acquired by purchase in 1803.

President Jefferson ordered a survey of the Columbia, and started out a continental exploring party in 1804, in charge of Captains Lewis and Clarke, who ascended the Missouri River to its source, crossed the grand continental divide, and encountered the Columbia River in about 49 degrees north latitude. They surveyed it to its mouth, including its tributaries, and thereby gave the United States a substantial title to the country. It was not, however, until 1846 that all dispute regarding the title was settled; it was then determined by treaty with Great Britain, fixing the 49th parallel north latitude as the boundary line between the United States and British America.

Oregon was sparsely settled with fur traders, principally English, who discouraged immigration and succeeded in keeping the country practically a wilderness up to the year 1833, when a few settlers found their way overland to this delightful and rich state.

In 1834 Dr. Marcus Whitman, a missionary, succeeded in planting a colony near Walla Walla, after which the country began to settle up gradually, but no considerable immigration took place until the excitement caused by the finding of gold in California in 1849, the overflow of disappointed gold seekers then found their way to Oregon.

The few settlers who were in the state succeeded in organizing a Territorial Government by the adoption by their votes of a Territorial Constitution in the year 1845. It was, however, not until August 14th, 1848, that Congress passed the act to organize the territory, the delay being caused by the open question between England and the United States as to the title, which was settled, as before stated, by treaty in 1846.

Joseph Lane, the first Governor of the territory, arrived March 3d, 1849, when the government was inaugurated. The act of Congress creating the territory of Oregon, included within that territory all of the present states of Oregon and Washington; the latter was, however, created a territory in 1853, which left Oregon its present dimensions, which was admitted into the Union as a state February 14th, 1859.

The state contains 96,030 square miles. The principal rivers are the Columbia and branches, Willamette, Fall River, Snake River and the Owyhee.

The Columbia is the only navigable stream in the state, which is only navigable 96 miles, to the Cascade range of mountains, which has several extinct volcanos, ranging in height from 4,000 to 10,000 feet above sea level; here is found some gold, silver and platinum. Coal has also been discovered in limited quantities. The forests abound with game, including the grizzly and black bear, panther, wild cat, elk, deer and antelope. The feathered game is quite plentiful, and

vies with California for variety, etc. The rivers swarm with salmon, which has aided the state very materially in a great industry, that of canned salmon.

The chief cities are Salem, (the Capital), Portland and Oregon City. The climate of Oregon resembles California; it is believed, however, to be superior in some respects. The death rate is small, and the state is regarded a sanitarium to some extent, and is certainly beneficial to a large class of diseases.

The immense forests of pine form no inconsiderable portion of the state's resources. Oregon pine being considered superior in many respects to any other found on the American Continent.

The principal agricultural products of the state are wheat, oats, potatoes and fruit.

In 1886 the state produced 11,133,000 bushels of wheat, valued at \$7,570,440, from 884,640 acres; 5,102,000 bushels of oats valued at \$2,142,840, from 199,199 acres; other crops 431,371 acres, product valued at \$5,467,030; total field products, \$15,180,310.

January 1st, 1888, the state contained 180,947 head of horses and mules, valued at \$9,090,543; milch cows, 78,997 head, valued at \$2,338,311; oxen and other cattle, 598,218 head, valued at \$12,172,122; sheep, 2,930,123 head, valued at \$4,987,069; hogs, 220,723 head, valued at \$664,819; total live stock, 4,009,008 head, valued at \$29,252,864, which, added to the value of product field crops, 1886 gives a total of farm products amounting to \$44,433,174, exclusive of fruits, which would increase the product, if statistics were obtainable, to nearly or quite \$50,000,000; then add the fisheries' industries, and the state's annual product would be increased considerably.

As yet the state has not joined the progressive movement for deep harbor facilities on the Texas Gulf coast, owing to the prevailing opinion of its people that the proposed harbors are too far away to benefit Oregon. That, however, is a mistaken idea, as from practical demonstration an interchange of commodities has taken place between Texas Gulf ports and Oregon within the past year.

Oregon will, ere long, awaken to the importance of joining this grand western alliance which is formed to advance the interests of the Great West.

## CHAPTER X.

## KANSAS—1682 TO 1889.

**K**ANSAS was included within the Louisiana Territory purchased from France by the United States in 1803, discovered by La Salle in 1682. It was successively a part of the District of Louisiana, of the Territory of Orleans, then of Missouri Territory, and after the admission of the State of Missouri, in 1821; it formed a part of the great unorganized portion of the Louisiana purchase until 1854, when a semblance of a Territorial Government was established under the famous Stephen A. Douglas' Kansas-Nebraska Bill. A fierce contest, however, raged between the slavery and anti-slavery inhabitants of the territory until 1859, the anti-slavery element gaining the ascendancy, after a bitter strife and much loss of life to both sides. During this turbulent period the famous John Brown, of Osawatimie, figured quite prominently, and waged a relentless war upon the slave trade men. Afterwards he went east, and in 1859 attempted to seize the arsenal at Harper's Ferry, arm the negroes, and incite the slaves to rebel against their masters; he was captured after being wounded, and by the United States authorities executed very promptly. This one incident, probably, more than any other, started the Northern people to thinking seriously of the abolition of slavery.

Kansas Territory at this time comprised the limits of the present state, and a large portion of Colorado, including where Denver now stands, as far west as Leadville, and south to the southern boundary line of the state, and containing 114,793 square miles. In 1859 a constitution was adopted for the proposed state, prohibiting slavery. This settled the question; Congress passed an enabling act, and January 29th, 1861, Kansas was admitted to the Union as a free state. At the same time the seceding states went out. Kansas furnished her quota of men to preserve the Union, and did her part bravely. With the cessation of strife the state enjoyed an era of prosperity scarcely equalled in the history of the nation. Population doubled and quadrupled in an incredibly short space of time, and it soon ranked among the leading states of the Union.

The boundaries of the state defined by the admission act of Congress cut off nearly 40,000 square miles from the west of the territory, the western boundary being the 102nd degree of longitude.

The state is bounded on the east by Missouri, north by Nebraska, west by Colorado, and south by the Indian Territory. Contains 82,080 square miles.



The surface is generally undulating, rising gradually from the valley of the Missouri 700 feet above sea level to 4,000 feet on the western border. Nearly the entire area is a rich prairie covered with grass, and almost devoid of timber, the little timber that is found is along the streams, and is principally cotton wood, a very poor class of timber, having very little if any commercial value. The interior of the state has no navigable streams; there are a large number of small rivers abounding in fish, and affording sufficient water for stock raising, etc.

The Missouri River on the eastern border furnishes navigation for about 50 miles along the state. The early settlement of Kansas was much aided by the possibilities of navigation that this river afforded, several towns being started before the "iron horse" made his appearance in Kansas. Coal of an inferior quality is found throughout the entire eastern portion of the state, comprising an area nearly 17,000 square miles in extent. A fair quantity of building stone is obtainable in almost all portions of the state. None of the precious metals are found, however, some of the baser metals are found in limited quantities. Immense deposits of salt are found in the central portion of the state, notably at Hutchison, Kansas, where at a depth of 300 feet a salt deposit has been discovered which appears unlimited, the vein being more than 300 feet in thickness, and covers quite a large area; quite extensive works have been established here, and salt forms one of the important industries of the state. Negotiations are pending whereby it is believed a strong English company will take hold of this property and develop it upon such a scale as to make Hutchinson the greatest salt producing city in America.

The climate of Kansas is very pleasant, in winter the temperature rarely falls below zero, and in summer ranges from 80 to 100 degrees, even in the warmest weather the nights are unusually cool, which makes the heat of the day tolerable. Occasionally severe wind storms sweep over the prairies, rarely, however, doing serious harm.

Wild game was formerly very plentiful, such as deer, elk and buffalo, all of which are practically extinct, as far as Kansas is concerned. Small game, such as ducks, geese, prairie chicken and quail, may be found in their season, and are quite abundant.

The soil is very rich and yields abundantly of all agricultural products, where drouth does not interfere, that, however, does not occur very frequently, and the state rates one of the best of the Union in agricultural products.

In 1886 the state produced from 5,812,615 acres, 106,129,000 bushels of corn, valued at \$34,212,240; 1,272,300 acres, 14,556,000 bushels of wheat, valued at \$8,442,480 from 964,930 acres, 25,516,000 bushels of oats, valued at \$8,201,030; from 99,031 acres, 5,744,000 bushels of potatoes, valued at \$3,733,600; from 1,320,000 acres, 1,884,000 tons of hay, valued at \$8,131,200; other field crops, 221,512

acres, product valued at \$1,152,720; a total field product valued at \$62,051,240.

January 1st, 1888, Kansas contained 724,997 head of horses and mules, valued at \$49,928,929; 640,081 head of milch cows, valued at \$14,344,215; 1,583,915 head of oxen and other cattle, valued at \$32,271,946; 830,139 head of sheep, valued at \$1,457,558; 2,377,561 head of hogs, valued at \$13,457,469; a total of 6,156,693 head of live stock, valued at \$111,460,117, which added to the field products makes a total valuation of all farm products aggregating \$173,511,357.

The principal commercial cities of the state are Leavenworth, Atchison, Lawrence, Topeka and Wichita.

Kansas, as much as any other state west of the Mississippi River, is deeply interested in the deep harbors on the Texas Gulf coast, and in all movements looking to that grand consummation has figured conspicuously, and is ably represented on the permanent Deep Harbor Committee by Hon. Howel Jones, of Topeka; Senator A. Caldwell, of Leavenworth; Judge J. E. Emery, of Lawrence; Hon. W. E. Hutchinson, and Hon. Marsh M. Murdock, of Wichita.

The following statistics are compiled from the official reports of the Secretary of the State Board of Agriculture for the State of Kansas, for ten years, showing the number of bushels of grain grown, and value of the crop:

Year.	CORN.		WHEAT.		OATS.	
	Bushels.	Value.	Bushels.	Value.	Bushels.	Value.
1879	108,704,927	\$26,562,674	20,550,936	\$18,448,711	13,326,637	\$3,397,416
1880	101,421,718	24,926,079	25,279,884	20,980,667	11,483,796	2,918,689
1881	80,760,542	44,859,963	20,479,679	21,705,275	9,900,768	3,855,749
1882	157,005,722	51,838,366	35,734,846	24,003,820	21,946,284	5,766,579
1883	182,084,526	47,492,663	30,025,936	22,322,119	30,987,864	6,135,788
1884	190,870,686	39,512,734	48,050,431	20,516,560	20,087,294	5,568,332
1885	177,350,703	40,428,327	10,772,181	6,829,945	31,561,490	6,558,303
1886	139,569,132	37,966,031	14,579,093	8,482,503	35,777,365	8,860,603
1887	75,791,454	26,836,422	9,278,501	5,759,548	46,727,418	12,232,243
1888	168,754,087	.....	16,720,719	.....	54,665,055	.....
Total	1,382,313,497	\$340,423,259	231,472,206	\$149,049,147	276,579,591	\$55,293,702

I hereby certify that the above is correct as taken from the official reports of this office.

Dated, Topeka, Kansas,  
October 30th, 1888.

M. MOHLER,  
Secretary.

The following statistics are compiled from the official reports of the Secretary of the State Board of Agriculture for the state of Kansas, for the year 1888:

Population, 1,518,552.

LIVE STOCK, 1888.				LIVE STOCK, 1887.			
Horses.....	700,723	head.	....	648,037	head.	....	\$58,323,330
Mules and Asses.	92,435	"	....	89,957	"	....	8,995,700
Milch Cows.....	742,639	"	....	692,858	"	....	13,857,160
Other Cattle ....	1,619,849	"	....	1,568,628	"	....	31,372,560
Sheep .....	402,744	"	....	548,767	"	....	1,077,534
Swine .....	1,433,245	"	....	1,847,394	"	....	12,931,758
Total No. 1888.	4,991,635	"	1887,	5,385,641	Value, 1887,	\$126,558,042	

I hereby certify that the above is correct as taken from the official reports of this office.

Dated, Topeka, Kansas,  
October 29th, 1888.

M. MOHLER,  
Secretary.



## CHAPTER XI.

## NEVADA—1848 TO 1889.

PRIOR to 1848 Nevada had no white settlements, the only inhabitants being aborigines; not even a mission had been established within the borders of the state.

In 1848 the United States acquired by treaty with Mexico the territory embraced within the limits of the state, together with California, New Mexico and Utah. The Territory of Nevada was not established until 1861, up to that time it was included within the Territory of Utah. At that date Nevada contained 17,000 inhabitants, attracted thither by the discovery of rich silver mines. The Comstock lode, in Storey County, was discovered in 1859, its annual output of silver for several years averaged \$15,000,000. It made and lost fortunes within a short space of time by stock jobbing operations, and finally, having practically exhausted the rich ore, the mine was abandoned. At times since, it has been operated on low grade ore, but has yielded only insignificant returns. The other principal mines are the Consolidated Virginia, California and Sierra Nevada, two of which have been worked to a depth of 2,870 feet, men being able to work at that depth not more than an hour or two at a shift.

The State of Nevada was admitted into the Union in October, 1864. It is bounded by California on the west, Oregon and Idaho on the north, east by Utah, and south by Arizona, contained 110,700 square miles. The surface is an elevated valley or basin, which stretches from the Rocky Mountains to the Sierra Nevada range, interspersed with mountains of minor importance, and varies in altitude from 2,000 to 7,000 feet, average being about 4,000 feet above the sea level. Extensive forests are encountered in the mountains, affording an abundance of the best pine lumber; several varieties of pine, spruce and fir are the principal growth. No hard wood timber in the state, none being found on this slope of the Sierra. A few mountains reach the height of 10,000 feet, none above timber line, the very summit being covered with a heavy growth of timber. The lumber interest is destined to become one of the state's principal industries. The precious metal output is still quite large, though insignificant as compared with the palmy days early in the '60s. The decrease in that industry has caused the agricultural and stock raising interests to receive more attention, and while inconsiderable as compared with some of our more advanced states, yet its increase and development is an evidence of progress, and adds hope to the already substantial worth of the state.

In 1886 there were 192,013 acres in crop, value of product amounting to \$1,955,280.

January 1st, 1888, the state contained 47,701 head of horses and mules, valued at \$2,505,098; 18,037 head of milch cows, valued at \$631,295; 323,400 head of oxen and other cattle, valued at \$5,819,648; 660,996 head of sheep, valued at \$1,259,660; and 21,087 head of hogs, valued at \$111,846; a total of 1,071,221 head of live stock, valued at \$10,327,547, which, with the field crops, aggregates \$12,282,827, the value of farm products January 1st, 1888.

There are no considerable cities in the state, Virginia City and Carson City (the Capital), are the principal ones. The climate is not as severe in winter as would be supposed at such an altitude; the summers are delightful, and on the whole the climate is regarded as very healthy. The educational advantages are very good, comparing with equally populous sections in the East. Society averages well, but can not be said to compare with adjoining states.

Nevada should join in the progressive movement for deep harbors on the Gulf coast, and ultimately the firm establishment of a "Western Commercial Congress." The Great West must have inter-state reciprocity, a partial success at that has just been accomplished by the Grand Inter-state Deep Harbor Convention, which brought together in Denver, in August last, over 700 delegates from thirteen of the twenty-two states and territories west of the Mississippi River.

## CHAPTER XII.

## NEBRASKA—1682 TO 1889.

NEBRASKA was included within that territory discovered by La Salle in 1682, and by him named Louisiana. This tract was purchased from the French by the United States in 1803, and was successively a portion of the Louisiana and Missouri Territories up to the time that Missouri was admitted as a state, with its present boundaries, in 1821. From 1821 until 1854 it was within the limits of that vast unorganized territory, which has since become rich and populous states; we refer to that portion of the United States which lies between the Missouri River and the Continental Divide.

In 1854 Nebraska Territory was organized under Douglas' Kansas-Nebraska Bill. It extended north to the British line, west to the main range of the Rocky Mountains, east to the Missouri River, and south to the 40th parallel of north latitude, which included all of North and South Dakota, part of Colorado, Wyoming, Montana and its present dimensions. In 1863 it was reduced to its present limits, the Missouri River on the east, Kansas and Colorado on the south, Colorado and Wyoming on the west, and South Dakota on the north. The state is 420 miles long by 138 to 207 miles in width, and contains in area 76,855 square miles.

Exclusive of a few soldiers who were stationed in Nebraska to protect the overland freight teams, this state, in 1854, contained no white settlers, and not until the building of the Pacific railroad was there any settlements formed of any consequence; that stimulated immigration to a large extent, but not until Nebraska had been admitted as a state did she experience any very decided or rapid increase of population. From that time since, the state has progressed with wondrous strides, and to-day not less than 1,000,000 people find homes within her borders.

The surface resembles Kansas' gently rolling prairies, beginning at the Missouri River, at an altitude of about 800 feet, it rises gradually as you proceed westward until, at its western boundary line, it reaches an altitude of upwards of 4,000 feet, the ascent being so gradual as to be unobservable without the use of an instrument. There are no mountains in the state. The Missouri, Platte and Niobrara Rivers are the only considerable rivers in the state, the Missouri being navigable throughout its entire course along the eastern border of the state, about 350 miles. The other two extend through the state from the



western border to their confluence with the Missouri; they are not navigable; their special benefit to the state being their supply of water for stock, and in the western section for irrigation. They are sluggish, and in no portion of the state have sufficient fall for any considerable water power. Their valleys are broad and very fertile, producing an abundance of all cereals, and grass for hay grows luxuriantly. The up-lands in the eastern portion of the state are almost as productive as the rich bottom lands, while the up-lands in the western section furnish rich grazing for the many thousand herds of cattle that are ranged there.

The state contains no minerals of commercial value. Coal in small quantities and of a very inferior grade has been encountered by boring for water in a few localities.

A fair quality of building material is found; sand-stone and a soft lime-stone, which hardens by exposure.

Nebraska has been noted for its immense live stock interests, grazing and shipping. Ogallala, on the Union Pacific railroad, was for some years the objective railroad point for stock men, and it is estimated that some seasons have witnessed the shipment, east from this point, of upwards of 200,000 head of cattle. The numerous railroads that now extend from the Missouri westward have intercepted the inclination to concentrate the great range interests in any one point, and Ogallala has lost most of her old time prestige. Nebraska also produces many head of hogs per annum, besides vast supplies of grain.

Omaha has become a great cattle, hog and grain market, and is fast rivalling her sister city (Kansas City) lower down the Missouri River. Here, too, is centered the manufacturing interests of the state, which is not inconsiderable. The other cities of importance are Lincoln (the Capital), Hastings, Grand Island, Fremont, Beatrice and Nebraska City. The climate is mild and dry, drought, however, rarely affects the crops, owing to the strength of the soil which retains the moisture longer than the soil of eastern states of the same latitude, and in this respect Nebraska is a better state for agricultural pursuits than Kansas directly south. The temperature in summer rarely reaches 100 degrees Far., and in winter it seldom drops below zero.

In 1886 Nebraska had in crops as follows: 3,879,123 acres of corn, producing 106,129,000 bushels, valued at \$21,225,800; 1,579,727 acres of wheat, producing 17,449,000 bushels, valued at \$8,201,030; 742,051 acres of oats, producing 21,865,000 bushels, valued at \$4,154,350; 172,088 acres of barley, producing 3,786,000 bushels, valued at \$1,173,660; 54,630 acres of potatoes, producing 3,278,000 bushels, valued at \$1,311,200; 960,000 acres of hay, producing 1,392,000 tons, valued at \$5,220,000; other field crops, 72,089 acres, valued at \$303,480; total value of field crops, 1886, \$41,589,520.

The state contained January 1st, 1888, 454,145 head of horses and mules, valued at \$34,033,331; 357,202 head of milch cows,

valued at \$9,108,651; 1,979,646 head of oxen and other cattle, valued at \$22,763,600; 422,112 head of sheep, valued at \$852,456; 2,334,526 head of hogs, valued at \$13,341,813; total, 4,647,630 head live stock, valued at \$80,099,851, which added to the field crops, makes a total of farm products January 1st, 1889, aggregating \$121,689,317.

The educational and social advantages of the state are exceptionally good, comparing with Illinois or Ohio.

Nebraska produces a very large surplus of farm products that go to foreign markets, exported via. New York. Eleven dollars per ton could be saved to the producer if facilities were provided for exporting via. the Texas Gulf coast. An interest has been awakened, as was evidenced in the late Inter-state Deep Harbor Convention, wherein Nebraska was represented by a large delegation of distinguished men, and is now represented on the Permanent General Committee by Hon. Champion S. Chase, of Omaha, Chairman of State Committee; Hon. O. E. Goodell, of Lincoln, Secretary; Hon. Herman Kountze, and Hon. W. N. Nason, of Omaha, and the Hon. Joel Hull, of Minden.

## CHAPTER XIII.

## COLORADO—1682 TO 1889.

**W**E now come to the Centennial State, so called because it was in the Centennial year (1876) that the state was admitted to the Union. Colorado is the central state of "The Great West," and is appropriately the seat of the grand movement for a Western Commercial Congress, the first session of which was held in Denver August 28th, 1888, lasting three days, and was designated "The Inter-State Deep Harbor Convention."

The state derived its name from the Colorado River, which river was so named owing to the color of the water; Colorado being the Spanish for red. The territory embraced within the boundary of the state from 102 to 109 degrees west longitude, and from 37 to 41 degrees north latitude. Was originally about equally divided between Spain and France, the United States coming into possession of the eastern half in 1803, through the great Louisiana Purchase, and the western half in 1848, by treaty with Mexico. That portion which was included within the Louisiana Purchase was successively a portion of Louisiana District (1804), Louisiana Territory (1805), Missouri Territory (1812), unorganized until 1854, when it was nearly equally divided between Kansas and Nebraska Territories.

In 1861 the State of Kansas was admitted into the Union, and the Territory of Colorado created, including the present boundaries, taking in a portion of the Territory of Utah, and some of the Texas cession of 1850. The first Governor of the Territory was William Gilpin, a pioneer, and sometimes called the founder of Colorado. When he was asked what he was doing out this far west, his answer was invariably, "Founding an Empire." While but a phrase, and used more than half in jest, the venerable Governor Gilpin is living to-day, and views an empire so vast in extent and resources that it promises to outshine the whole world besides. (The Governor referred to all that territory west of the Mississippi River, there was no Colorado then.)

Governor Gilpin may be seen any day walking the streets of Denver, a hale and hearty old man, esteemed by all. He is sufficiently well off in this world's goods to make him independent. His favorite pastime is to visit old acquaintances, and talk over reminiscences of the early days of "The Great West," or discourse upon his proposed map of the world, in which, as he says, he proposes "to blot out the d—m



Atlantic Ocean from off the face of the earth." The Governor builded better than he knew, and the West has outstripped his prophecy, which, in 1860, or even fifteen years later, was regarded almost universally as the utterances of an enthusiast and incredible. Gradually the day began to dawn, and in 1880, the sun began to shine. The day had arrived when "The Great West" could justly claim to be an Empire; its natural products were then balancing the East, (the Mississippi River the dividing line), while the center of population was scarcely leaving Ohio on its steady march westward.

Hon. John Evans was the War Governor of Colorado, appointed by President Lincoln to succeed Governor Gilpin, and was, therefore, the second Governor of the state. While Gov. Gilpin is generally called the founder of Colorado, it is universally conceded that Gov. John Evans is the father of the state and its greatest benefactor, having inaugurated more and greater enterprises than any other citizen of this great state. Governor Evans still survives, and is in good health, abounding in wealth created by his own energies and successful enterprises. His home is in Denver, where an eight-story stone block, and several lesser ones, stand as monuments of his great worth to Colorado.

"The Star of Empire," attracted by a Colorado sky, and the loadstone of western natural wealth, is gradually creeping westward; in fact, it might be said to have passed even now to the central state of this new empire, and paused to move no more, being unable to pass that massive wall which nature has erected just west of Denver, and which extends north and south through the state, dividing it quite equally into east and west. This unsurmountable wall is variously named, "the Backbone of the Continent," "the Continental Divide," "the Water Shed of America," or more properly, "the Rocky Mountain Range."

The sources of the streams of Colorado are high up in the mountains, varying from 10,000 to 12,000 feet above sea level. The North Platte and South Platte Rivers, have their source in the north central part of the state, only separated by a mountain range; the north fork flows out of the state on the north boundary, in a northeasterly direction; the south fork flows south and east, the two streams being separated where they issue upon the plains by some 300 miles; they approach each other until they are united a few miles east of the northeast corner of Colorado. The Kansas and Grand Rivers have their sources near the center of the state, and within a few feet of each other; the Arkansas flowing south and east to the Mississippi River, and thence into the Gulf of Mexico, while the Grand flows west and south into the Colorado River, and thence into the Gulf of Lower California. The Rio Grande River has its source in the southern part of the state, flows almost directly south into the Gulf of Mexico, forming the boundary line between Texas and Old Mexico. Thus it will be seen that Colorado might well be termed the central state of "The Great West."

Colorado's chief industry is mining. Gold was first discovered in 1859, near where Denver now stands, and every year since the precious metal output has been on the increase. The record for 1887 surpasses the first ten years of Colorado mining by some thousands. The following is a record by years from the first discovery up to January 1st, 1889:

Year.	Gold.	Silver.	Lead.	Copper.
1859-69	\$27,200,000	\$ 330,000	.....	.....
1870	2,000,000	650,000	.....	\$ 20,000
1871	2,000,000	1,000,000	.....	30,000
1872	1,725,000	2,000,000	\$ 5,000	45,000
1873	1,750,000	2,190,000	25,000	65,000
1874	2,000,000	3,096,000	75,000	90,000
1875	2,150,000	3,125,000	60,000	190,000
1876	2,725,000	3,323,000	80,000	170,000
1877	3,150,000	3,725,000	250,000	300,000
1878	3,500,000	6,340,000	625,000	275,000
1879	3,200,000	12,375,000	525,000	315,000
1880	3,200,000	18,615,000	1,675,000	480,000
1881	3,300,000	17,160,000	3,250,000	425,000
1882	3,250,000	16,600,000	4,400,000	520,000
1883	4,000,000	17,370,000	4,100,000	490,000
1884	4,300,000	16,000,000	3,750,000	475,000
1885	4,200,000	15,300,000	3,850,000	450,000
1886	4,450,000	18,250,000	4,675,000	510,000
1887	4,500,000	16,292,000	5,000,000	1,000,000
1888	5,700,000	23,500,000	5,000,000	900,000
Total...	\$88,300,000	\$199,792,000	\$37,365,000	\$6,745,000

A grand total to January 1st, 1889, of \$332,202,000. The first quarter of 1889 shows a decided increase over the same time in 1888, and, if continued, will place Colorado's metal output for the year close on to \$50,000,000. Another important and growing industry is the petroleum fields being discovered.

#### OIL WELLS.

Oil was first discovered in 1862, near Canon City. No practical use was made of it until 1880. When a well was put down 1,225 feet boring for water, at that depth a flow of petroleum was struck, yielding about 40 barrels per day; since then about twenty wells have been bored, and the daily flow has been increased to 1,000 per day. The total output of these wells to date is probably upwards of \$2,000,000, which, added to the coal and metal output, makes \$359,202,000. Then add the building stone output to date, about \$11,000,000, and we have the enormous amount of \$370,202,000 wealth extracted from the mountain regions of Colorado through mining alone, nearly the entire amount extracted within the past 20 years. It is almost incredible, but nevertheless indisputable figures show it. The iron industry, although in its infancy, would probably increase the wealth extracted from Colo-

rado mountains by nearly or quite \$5,000,000, making a grand total of \$375,000,000.

Colorado combines the essence of wealth which requires nearly all of the states east of the Mississippi River united to compare with it. In this connection the following regarding the industries of the Great West, and of Colorado, will prove interesting to the reader, and may induce some idle capital to be invested in the field of industry that this Great West offers to the wealth of the East.

English journals have already conceded that the World's Exchange is destined soon to be drawn on New York, rather than London, and with the single exception of iron products, the United States have far exceeded Great Britain in every staple manufacture; and what is more to the point, has almost illimitable resources, yet undeveloped for future growth. It is this certain prospect of remunerative industries, such as the Standard Oil Co. presents, that is bringing foreign capital here for investment in manufacturing and mining industries. For more than ten years some thirty alien landlords and foreign syndicates have owned over 20,000,000 acres of our arable lands; but now the inquiry is for good stone quarries, iron and coal measures, oil lands, tin, mica, and copper plants, as well as gold and silver properties, all of which are found in abundance in Colorado. Where the great metal deposits are, there must the furnaces come, the foundries be opened, and the product worked to its highest commercial form. The West will excel in the manufacture of woolen goods, as the South must in the merchandise of cotton fibre. And the sugar and rice of Southern commerce will be met by such vast Western values in lumber and metal products as the world's market never saw before, from Puget Sound to the Gulf; such a highway of riches will yet annually pour, as will heavily tax our freight ships' bottoms to carry. Men and money are all the elements required to effect more than any mercantile prophet can now foresee.

Already in the markets of the world American calicoes and cutlery successfully compete in price with the British; while our wheat, cotton, meat and lumber make the price for all other countries in similar staples. But the day of bulky export of raw products must soon merge into a brighter one, when the American artisan and mill shall convert the bulk of our crude material and crops into the highest commercial form for inter-state and inter-national export, and multiply our sixty billion dollars worth of United States exchange in 1888, into one hundred billion dollars, and more by 1892, with such overwhelming advantage to American production, that the French, Belgian and English chemist, mechanic and manufacturer will be forced, from self-interest, to emigrate hither, and combine his skilled labor with our material resources. American industries are not exactly in their infancy, needing an exorbitant tariff to protect them; but a better economy is requisite in their manipulations. Raw products must be



taken, as near as possible, to their original site, and manufacturing facilities applied. The eastern states now having a monopoly of home manufactures, so called, may object to this, but the Middle and Western states, especially the latter, are sure to win in this controversy, even as Southern cotton mills have proposed paying 20 to 30 per cent. dividend annually, where New England factories could scarcely net 5 per cent; so the Great West, with her boundless cheap food supplies and unlimited deposits, will bring the wool, stone, lumber and metal workers of the world eventually to develop her quarries, forests and mines. Other things being equal, the land that has the largest land-crops and smallest population is ahead in the race for independence. Our population is from sixty-three to sixty-four millions, and our agricultural, forest and live stock products of all kinds amount annually to about nine billion dollars worth; this is about \$140 to every man woman and child. No other country is so well fed and has so much food products for export. Nowhere is the class of high liver so large. No other nation eats seven hundred millions in animal food alone annually. Our average citizen buys daily in meat 22 cents' worth, of bread 5 cents' worth, and in coffee, tea, sugar, fruit and vegetables, 9 cents' worth.

The population of the globe is carefully estimated at very nearly fifteen hundred millions, no hundred millions of that number are living upon such a wonderful area for productive resources as are the citizens of the United States. According to the brilliant and eccentric Ex-Gov. Gilpin, of Colorado, "we straddle the axis of the temperate zone;" and we certainly have developed during the past one hundred years as no country within the zone has. Asia has yet four-sevenths of the earth's population, about 52 to the square mile, and many millions periodically starving.

Europe has one-fifth of the earth's population, and most of them poorly nourished, and thousands half starved. She is crowded with a population of nearly 90 to the square mile, and represents the extremes of poverty and wealth, as no other country does.

Africa has one-seventh of the earth's population, or about 17 to the square mile. Two hundred and fifteen cities of the world number over 100,000 population each; thirty number over 500,000; the most populous in the order named, being London, Paris, New York, Vienna, Berlin and Canton; each a million and upwards; the great British metropolis swarming with four and a half millions, all but half a million of them pauperized to a greater or less degree.

What wonder then that the tides of emigration to our country are so large, or that the proper advertising of the Great West and her advantages should be regarded as philanthropy upon the broadest scale.

Every state and territory west of the Mississippi River, except eight, being watered by streams which have their source within this state. The fall is very rapid in these streams; waterfalls and rapids are common, and the water in its mad course has, in past ages, worn deep channels in and through the mountains, which cuts or canons often measure from 1,000 to 2,000 feet in perpendicular depth. The most notable probably of all being the Grand Canon of the Arkansas, which canon has been compelled to yield to the almost superhuman skill of the civil engineer, and the whistle of the locomotive of that great pioneer railroad, the Denver & Rio Grande, is heard in shrill discord with the music that has been made for thousands of years by the laughing, sparkling waters of the noted Arkansas. The wonderful engineering feats performed in this grand canon are only equalled by the same enterprising railroad in building their line over Marshall Pass, Veta Pass and the line through the Black Canon of the Gunnison River. Much praise is due the Denver & Rio Grande management for the rapid development of Colorado and her mineral resources. It is the greatest narrow gauge system in the world. The third rail is being put down, and standard gauge cars can be run over much of the system.

The extensive irrigation system of Colorado is due entirely to the rapid fall of streams, and their everlasting supply of water taken from the perpetual snow banks high up in the mountains above timber line. The Platte and Arkansas Rivers fall several thousand feet from their source before emerging upon the plains, and through considerable of their course they flow through large parks, or valleys, several miles in extent, which have only a slight fall, consequently the average fall for 40 to 50 miles would be 200 feet per mile. The power capable of being developed by water wheels in these two streams alone would suffice to turn the wheels of every factory in New England. The day is approaching when electric wires will be utilized to distribute this power equitably throughout the state, to drive the loom and spindle of the cloth manufacturers which are sure to be established sooner or later, where raw material is cheap and native to the soil; where power can be supplied at a minimum of cost, and where consumption is greater per capita (owing to the nature of employment, mining) than any other people on earth. All of these are concentrated in Colorado. The state produces annually over 10,000,000 pounds of wool, every pound of which, if manufactured here, would go rapidly into home consumption. The greatest cotton state in the Union joins us on the south, viz., Texas, which for lack of cheap power must export her entire crop. Add to the above the boot and shoe industry, the same conditions govern cheap leather, tanned with a native weed, said to be superior to any other tanning material in America. Here, too, are hides almost without number, taken from the hundreds of thousands of cattle marketed per annum. Cheap water power obtainable, and cheap fuel

if preferred, coal as low as 80c. to \$1 per ton, owing to proximity of mines. Cheap fuel has stimulated the iron and smelting industries of state to a wonderful degree. Side by side with the best grades of heating and cooking coal in this state lies immense iron deposits, sufficient in amount to supply the world for a century, and coal to manufacture the same, beside furnishing the world with coal for heating and manufacturing purposes for a thousand years to come. Hayden's survey for the United States Government developed the fact several years ago, that Colorado contained 30,000 square miles of coal area, veins varying in thickness from 3 or 4 feet to 14 feet in thickness, often ten or fifteen veins lying one above the other, with only a thin shale between, and varying in quality from common lignite to the best bituminous and cooking coals, and in quite a large area anthracite coal, unsurpassed by the famous Pennsylvania hard coal. Hayden's survey defined the coal limits then known; subsequent developments and discoveries have proven that Hayden overlooked the small amount of 10,000 additional square miles of coal area in the state, of equally as good if not better quality of product than was included within the 30,000 square miles established by his survey.

We quote from the March number of the Commonwealth extracts from an article by Alfred Dexter, which will prove of considerable interest in connection with Colorado's coal interests:

#### OUR COAL MEASURES.

"No more conspicuous example than the State of Pennsylvania can be found showing the wealth in coal mining. Next to food and raiment, shelter and fuel are necessities of daily life, and the state that has coal products in all-sufficient abundance, both for home consumption and export, is sure of a royal revenue therefrom. Pennsylvania has long been on record as producing half the coal mined in the United States; but it is now officially announced that the area of the coal beds of Colorado is nearly equal to the entire territory of the Keystone State, or fully 40,000 square miles. Meager as are our appliances for getting the product out and to market, yet the output for 1888 was between 2,000,000 and 3,000,000 tons; and it is rationally asserted that this state has deposits sufficient to supply the increasing population of the entire Union for centuries to come.

"One hundred years ago, and Pennsylvania stood only third in point of population; but 50 years past she has ranked easily as second—New York, of course being first. Pennsylvania ranks first in coal and petroleum, iron and steel; second in rye, buckwheat and potatoes, also in printing and publishing values; third in milch-kine, hay, and also in soap manufacture and in railroad-lines mileage; fourth in tobacco and oats; fifth in malt and distilled liquors, and in the manufacture of silk goods; sixth in the production of salt and copper, and



the same in agricultural implements; and eighth in the breeding horses and sheep.

She produces about 5,000,000 tons of pig iron annually, and fully 50,000,000 of tons of coal, which certainly must mean as many millions of dollars yearly revenue. In these immense resources of diversified and staple values, Pennsylvania, more than any other state, is the prototype of the Centennial State; and in no feature so particularly like this as in her great coal fields.

Great Britain still yields double the quantity of coal produced in the United States, and over one-half the product of the world, and holds very nearly the same superiority in its annual output of pig-iron. Without her coal resources England could never have so excelled in iron and steel values produced, and the logic of like conditions there must bring the same results finally to Colorado. For, in addition to coal, iron and tin, this state will find her home market largely in the endless and constantly increasing local industries involved in the reduction of metal and coin of our precious ores. And to secure this end most successfully we import nothing, but find all the necessary elements within the state.

With the past fifteen years Colorado has made an output of 13,000,000 of tons of coal, at the very minimum estimate; and this has figured immensely in the economy of her aggregate production of gold, silver and base bullion products during that time, which products very considerably exceed \$330,000,000 in value.

As illustrated by the cases cited of iron and steel production in England and Pennsylvania, so, through the fuel possibilities of this modern Aladdin, coal, we have transformed seemingly barren and worthless mountain rock into the shining and perpetual tokens of commerce, by which the barter of the world's merchandise is effected,

It is undeniable that in estimating the great natural resources of Colorado, her coal fields, which range throughout an area of about 100,000 square miles, and comprise coal-bearing strata of 40,000, must ever stand among the first and most important certainly known; and these figures are likely to be exceeded, rather than cut down, by developments constantly being made.

The working veins run on an average six feet in thickness, at the cost of mining at present is from \$1 to \$2 per ton, according to locality and conditions.

According to the following statement Colorado coal, at the mines, is worth \$2.29 per ton, a very handsome figure when compared with Ohio coal, but still admitting of a favorable comparison with Pacific Coast coal. The figures doubtless may be accepted when apportioned among the mines, but would scarcely hold good if tonnage was taken as a basis. In nearly all the leading producing districts, good coal at the mines can be secured at from 75 cents to \$1.25 per ton, the price at Trinidad varying from 50 cents to \$1.00 per ton.

## PRODUCTION OF COAL IN THE UNITED STATES IN 1888.

States and Territories.	Quantity Short. Tons.	Value at Mines.	Per Ton.
Pennsylvania,			
Anthracite.....	43,578,000	\$84,977,100	\$1 95
Bituminous.....	32,500,000	30,875,000	0 95
Ohio.....	11,950,000	11,114,000	0 93
Illinois.....	11,855,188	11,309,030	1 12
West Virginia.....	5,498,800	6,048,680	1 10
Iowa.....	4,842,220	6,304,110	1 30
Maryland.....	3,479,470	3,293,070	0 95
Indiana.....	3,140,979	4,397,370	1 40
Missouri.....	3,909,967	8,650,000	2 21
Kentucky.....	2,570,000	3,084,000	1 20
Alabama.....	2,900,000	3,335,000	1 15
Tennessee.....	1,967,297	2,164,026	1 10
Colorado.....	2,185,477	4,808,049	2 29
Kansas.....	1,850,000	2,775,000	1 50
Wyoming.....	1,480,487	4,811,583	3 25
Virginia.....	1,073,000	1,073,000	1 00
Washington.....	1,215,750	3,647,250	3 00
Indian Territory.....	891,000	1,737,450	1 95
New Mexico.....	635,042	2,063,887	3 25
Georgia.....	230,000	345,000	1 50
Utah.....	205,000	430,500	2 10
Arkansas.....	193,000	289,500	1 50
Texas.....	90,000	184,500	2 05
Michigan.....	65,000	104,000	1 60
California.....	85,000	340,000	4 00
Oregon.....	50,000	150,000	3 00
Dakota.....	25,000	43,750	1 75
Montana.....	41,467	155,501	3 75
Rhode Island.....	7,500	17,875	2 75
Nebraska.....	1,500	3,375	2 25
Idaho.....	600	2,700	4 50

## COLORADO INDUSTRIES.

The story of the cranky old Bay State farmer, who had a son graduate from Harvard College, at an expense of thousands of dollars, and on the return home of the expensive hopeful, bluntly asked him at the dinner table: Wall, John, what's the good of all your larnin'?" "What kin ye make?" is a good story for Colorado; till lately the youngest of states, and richest naturally in variety and value of crude products; but what can she make out of them? Our worthy Labor Commissioner, and the Secretary of the Chamber of Commerce, have displayed a good deal of well-directed activity in collecting much accurate information from year to year, concerning our already established manufacturing institutions; also, the occupations followed by our working classes, male and female; number of hours employed; wages by day and piece work; expense of board or housekeeping; sanitary condition of their dwellings, etc., etc.; but still the cry comes up from the ranks of the unemployed: "Who will give us work? What can we earn? and at what?" and while this mountain air sharpens the appetite, promotes digestion, and runs the nervous system at a higher rate of speed, food is its nutritious fuel, and labor must be in harness to obtain it. Eastern workmen and their families are coming by the thousands from their over-crowded conditions there to this land so highly reputed for health, and with so many industries to institute and develop. Fortunate will it be for us as a state if sufficient capital shall come with the skilled labor, and which will turn aside and occupy the favorable sites for manufacturing, to be found here on the right hand and the left, and so materially add to our practical and revenue-bearing productions. Arizona copper waits to be compounded with Colorado aluminum for bell metal. Steel cutlery and tools, axles and springs should be made to supply carriage works with material for further manufacture, and the public generally with home products. Window glass and household wares of that crystal material have been made here to a small extent, but have not been encouraged as they should have been in a country that has the superabundant and superior character of silica deposits that Colorado has. All our own consumption of clay, iron, lead, water and gas, and oil piping, should be supplied from and through our own manufacture, with tens of thousands of car loads for export throughout the adjacent states and territories. Bronze and spelter foundries and moulders should find welcome conditions here for the prosecution of their specialties. The City of Newark, N. J., has a surplus of those who are perfectly familiar with all the diversified industries that may be based upon these metals.

We have for years been advocating the establishment of oil, paint and glass works here, which should employ the native mineral paint rock which lies in immense deposits throughout the state. One local manufacturer is worth to a city a dozen mere merchants in foreign



productions. A better field for a large leather tanning manufactory than this is was never known in this or any other country; for tanning, for tawing, for coloring and setting the dyes with mordants in the shortest possible time, and in the most effective way.

The reports made from time to time on the kaolin and kindred deposits about Canon City, and other points in Colorado, have had the result of interesting eastern pottery manufacturers to investigate, and having done so to their satisfaction, we may expect from correspondence had, that branch manufactories will be eventually established here, and certain it is that with practical management they can sustain themselves with very handsome profits. A company should be able to put up a series of two and three story buildings in which to do all the fine finish and decorative work in the best modern style of the art, with a proportion of four decorating kilns, to eight burning kilns, and take the highest standard of porcelain and semi-porcelain for the products.

There is also large profits in manufacturing sanitary earthenware, and which consists of all the goods entering into the plumber's trade. Ordinary brick can also be faced with one porcelain side, so that when laid in a wall with porcelain face exposed, like it should be in hotel courts, or naturally dark passage ways, the light reflected from the porcelain surface would illumine the spaces.

Our iron casting works should comprise every form of iron machinery that could be utilized in this western country, and afforded at prices that would dismay eastern competitors; not only engines and boilers, but cold rolled shafting, and pullies of every size, hangers to suit; presses and dies to cut sheet metal patterns of every thickness, and stamp out pressed metal goods of every description; machinery to work as clay and pottery presses, plungers, shakers, agitators, pressure pumps, and every appliance for turning out glass and color paints.

Nowhere throughout the most fertile districts of the world does a dairy country exist so thoroughly equipped by natural conditions of grasses, water springs, cool nights, bright sunny days the year round, and better grazing facilities than exist in the Colorado series of valleys, from the Yampa Valley, in Routt County, bearing due south, to the line of New Mexico, and into the valley of the Chama River, N. M. The dairy products of the United States are of nearly a billion dollars annual values; and Colorado, for butter and cheese factories, should come towards, if not at the very front at once.

#### IRRIGATION, BY F. L. DANA.

This brings us to a subject of more than usual importance—that of irrigation. Very little can be added to the article written by the author of this work, and published in the February 4th, 1888, issue of the "Exchange Journal," except the system is still more extended. We quote from it as follows:

According to the Constitution of the State, the waters of the rivers and streams are the property of the public, and while every person has a right, within certain statutory limitations and restrictions, to as much water as he can consume, and not interfere with rights previously acquired by others; yet he has no right, neither can he claim more water, than he can consume.

In the older irrigation districts, the irrigation of fifty acres of land is taken as the standard duty of a continuous flow of one cubic foot of water per second during the irrigation season of 100 days. In other districts traversed by larger canals the standard has been raised to sixty acres per cubic foot per second, which is equal to an annual rainfall of about twelve feet. After two or three years, when the soil becomes thoroughly saturated and settled, the duty of the water grows greater, and, judging from the history of older countries, the continuous flow of one cubic foot of water per second for the irrigating season will be sufficient to irrigate 120 acres. It is almost incredible that water in some of our main canals has a fall of only six inches in one mile, and the carrying capacity of one we have in our mind—the Citizen's canal, near Del Norte, is 1,000 cubic feet per second. The Del Norte canal, probably the largest in the United States, has a carrying capacity of over 2,500 cubic feet per second. It is 65 feet wide at the bottom and 98 feet wide at the top, carries water five and a half feet deep, and for some distance has a fall of 30 feet per mile. This canal is 56 miles long (main canal); it cost over \$300,000, and irrigates over 50,000 acres of land. There were 1,750,000 cubic yards of gravel, rock and earth excavation to form the channel, requiring 3,500 men and 2,000 teams to perform the great task, which was completed in the unprecedented short period of four months. The largest canal in Italy—the Naviglio Grande—is only half as large as the Del Norte canal, cost more than \$12,000,000.

By practical experience the cost of construction of canals in Colorado varies from 75 cents to \$2 per acre, and makes land, otherwise practically worthless, worth from \$50 to \$100 per acre; such land, however, is on the market at from \$10 to \$100 dollars per acre.

The art of irrigation is older than history, and is extensively practiced in every country of the world, and yet in the United States it is scarcely understood, except in Colorado; here we know its beauties and utility. About twenty-five years ago a few persons turned their attention from gold hunting to the more profitable industry of agriculture, and were forced by the scanty fall of rain to adopt the irrigation system, which proved a blessing in disguise. Many of our wealthy citizens laid the foundation for their present millions in the early pioneer days by tilling the soil without contending with drought or failure, and alternately supplicating and imprecating Divine Providence, as Illinois, Iowa, Indiana, and most of the eastern, middle and western states have been doing these many years. A farm of 20 acres

in Colorado "under ditch" is as capable of sustaining a family as 160 acres in Illinois or Indiana; then why do farmers of moderate means remain in a drought-stricken, cyclone-ridden, pestilential and malarial section of the United States, when Colorado offers health, wealth and happiness? A climate unsurpassed by even Italy. A health-giving atmosphere with the zephyrs laden with ozone from the highly electrified pine and spruce covered mountains; protected from the blizzards by the same mountains; a country that for the fifteen years last past had an average annual temperature of 49.5 degrees; average annual wind velocity of 6.3 miles per hour; average annual rainfall, 14.98 inches; average annual number of sunny days, 345, only 32 days in thirteen years (July 20th, 1872, to February 22d, 1885,) that the sun was not visible, and within that time, from October 30th, 1879, to February 5th, 1881, fifteen months, the sun was not obscured all of one day; average death rate, 10.5 per 1,000 inhabitants, 5 per cent. of the deaths are consumptives who have come here too late for the climate to do anything for them. We have transgressed somewhat our subject in our zeal to picture Colorado's advantage climatically. To recur to our subject. The first efforts at irrigation in Colorado were of necessity very crude and less effective than the improved systems in vogue to-day. About one-fourth of the water of the streams the state is now appropriated, and the system is said to have redeemed of from two to three million acres of land, which means that with the present water supply, we can hope to redeem at least ten million acres of land, and with the proposed reservoir system to be instituted, we can trebble the present capacity of our streams. We have in this state lands on the Divides, and adjoining the Foot-hills, and in the Foot-hills that do not require irrigation, the precipitation is sufficient for all purposes, and on our eastern border three successive crops have just been raised without irrigation. This will foot up in the millions of acres in all within our state, either in the rainbelt or capable of irrigation. This state has nearly 25,000,000 acres of such land, which would form an agricultural area nearly as large as the entire agricultural state of Illinois, nearly one-half of which is capable of sustaining a population, per acre, several times in the excess of the acreage of Illinois, and the rest at least as much, and it is fair to presume that the time is near approaching when Colorado will be more populous than Illinois, even viewed from an agricultural standpoint. Added to that, its mountains of gold, silver, copper, lead, zinc, iron and coal, natural gas and oil, which will require a million of population to develop, and furnish a home market for the agriculturist who inhabits the land which produces most abundantly. The soil is naturally warm, being rich sand and gravel, and with the assistance of a small amount of water, grows in equal or greater abundance any crop or fruits that can be raised in any state in the Union, except those states bordering on the Gulf of Mexico, or Southern California.



The following is an estimate of the number of miles of ditches constructed in Colorado, and of the number of acres irrigated thereby; this estimate is made from the reports of Water Commissioners of Water District 2, 3, 4, 5 and 8. These reports were made at the request of the State Engineer, for the purpose of securing data from which to determine the duty of water, and will be required of all the Water Commissioners of the State next year. Five out of nine Districts in Division 1, report as follows:

District No. 2.	miles of ditches	126.25;	acres irrigated	43.998.
" " 3.	" "	330.5;	" "	107.045.
" " 4.	" "	235.75;	" "	69.908.
" " 5.	" "	225.5;	" "	86.655.
" " 8.	" "	121.5;	" "	32.010.

Estimated in Division No. 1, 1,532 miles of ditches, 506,000 acres.

Estimated for the state, 3,000 miles of ditches, and 2,000,000 acres being irrigated.

From reports of Prof. Blount, of the State Agricultural College, we quote some of the experiments made during 1887, on the state farm, which farm is probably kept in better order than the average farms in the state, and allowance should be made therefor:

Buckwheat, average 33 bushels per acre; barley, 31 varieties, averaging 30 to 60 bushels per acre; oats, 47 varieties, range from 15 up to 101 bushels per acre; wheat, 12 varieties, averaging from 16 to 32 bushels per acre; all vegetables grow here in the greatest abundance, likewise all small and large fruits not tropical. No record of fruits or vegetables appear in Prof. Blount's December report.

It is safe to say, however, that fruits and vegetables of every variety, except tropical, are raised here in as great abundance as anywhere in the United States. Colorado vegetables command a premium wherever marketed. Not one-tenth of the fruit used in the state has been raised here; prices are exceedingly good, and the fruit and berry culture is profitable, and will be continued until the home market is supplied.

The states immediately east of Colorado are as much interested in this subject of irrigation as is Colorado,\* not because they should use the irrigation system, but it has been practically demonstrated that eastern Colorado has benefited from the irrigating system in use nearer the mountains; it comes from moisture in the air, caused by the evaporation made possible by the water—4,320,000,000 cubic feet in 24 hours—being spread over millions of acres of ground. Nearly 40 per cent of that vast volume of water is evaporated, and comes down on Eastern Colorado, Western Kansas and Nebraska in the shape of rain, which nature distributes in such an equitable manner as to make fertile millions of acres of land, hitherto known as the arid desert

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\*See Major Powell's Report in Appendix, for page see Index.

region. The west half of Kansas and Nebraska can thank Colorado for their fertility, and their comparative exemption from drought. The extension of the Colorado irrigating system by the proposed reservoirs will not only exempt Kansas and Nebraska from drought, but will exempt the Lower Mississippi and Mississippi Valley States from the damaging and dangerous floods known as the June rise in the rivers. The June rise in the Missouri and Mississippi is due wholly to the melting snows in the mountain regions coming down at that time, and no provision being made to store it. The United States Government\* should appropriate the necessary money to successfully control the torrents of the mountains, to spread a bounteous blessing over the arid region of the United States, and avert the calamities usual in the Lower Mississippi during the June rise of the Father of Waters. It would appear that from our estimates, that during 100 days (the irrigating season) of the summer, there is carried to our eastern borders, by means of clouds formed from the evaporation usual during that period, from the irrigation section of Colorado, about 1,728,000,000 cubic feet of water per day, or the enormous amount of 172,800,000,000 cubic feet in 100 days, sufficient water to be equal to a rainfall of 36 inches per annum, covering an area of 4,000,000 acres. With the present water supply, if properly controlled and cared for during the remaining period of 265 days of the year (the volume of water being nearly twice as great out of the irrigating season as in it) would increase the irrigated section by 330 per cent., or about 10,000,000 acres in total; that would then increase the amount of water evaporated equal to four times the present amount, or the amount of water possible to have evaporated from the waters of the state by the storage system would amount to the incredible sum of 691,200,000,000 cubic feet, or sufficient water to equal an annual rainfall of 36 inches spread over 16,000,000 acres. The amount is hardly comprehensible, and to simplify the figures, it would amount to a column of water in height of one and three-fifth miles, covering one section of land of 640 acres.

The extension of the irrigation system in Colorado may be somewhat gauged by the number of plats of new ditches filed with the State Engineer since July 17th, 1887, being 210 in six months, or 33 per month. That is a greater number than was filed from the early settlement of the state to July last. The present year promises nearly as great extensions,† and the good work is expected to continue until every drop of water of the state has been made to perform its duty in the development of this great state. In the San Luis Valley there is said to be 50,000 acres of the best prairie land under ditch that is awaiting the homesteader and pre-emptor, and many thousands of acres that is not under ditch at present, but can be brought under by the construc-

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\*See Major Powell's Report in Appendix, for page see Index.

†During 1888 the number of new ditches filed amounted to 611, at a rate of 51 per month, exceeding our prediction of a month ago.

tion of other canals. The Colorado Land and Loan Company own the two great ditches that irrigate this vast fertile valley, containing nearly 7,000 square miles. They own some 80,000 acres, a large portion being cultivated, that they offer for sale at from \$5 to \$10 per acre, and charge for water for either their lands or homestead properties under their ditch \$1 per acre per annum, which is equal to an insurance of the most abundant crops. What farmer in Illinois or any other Eastern state would not give \$5 per acre per annum to be insured a large crop each year. All crops raised in Colorado have a home market. There is not one cereal raised in the state that supplies the home demand and only three vegetables that approach the demand, these are the potato, cabbage and celery; these three vegetables are shipped to Eastern markets, and are celebrated for their excellent qualities. No celery or cabbage in the United States approaches our product. We ship cabbage loose in the cars as far as St. Louis without injury. Our celery finds its way to the best hostelrys in New York City and other Eastern cities.

The Committee of the Real Estate Exchange, appointed to investigate our vegetable and canning facilities and demands, reported that our three factories put up last season 20,000 cases of tomatoes and 25,000 cases of other vegetables, about one-third of the quantity actually sold in Denver. Tomatoes brought seventy-five cents per 100 lbs. Dealers expect to shave that price a little this season, probably to about sixty cents per 100 lbs.; even at that price the producer is well repaid. One person, from one-half acre near Denver, raised the almost incredible amount of 22,000 lbs of tomatoes, at the rate of \$330 per acre.

In connection with the foregoing, written over one year before the State Engineer's report, it will be interesting to follow how closely they compare, and for that purpose we introduce here the preface to the last biennial report by State Engineer J. S. Green:

A brief reference to the physical features of Colorado, to her rapid development in irrigation matters, and to the governing doctrine in her irrigation laws, may not be a improper preface to this report.

Situated on both sides of the Continental Divide, and including many ranges of a secondary order, Colorado presents a most diversified surface of mountains, plains and valley lands, aggregating in area some 66,560,000 acres, not five per centum of which is void of vegetation, and more than half of which will, in return for the quickening qualities of water, yield the most abundant harvests.

To secure this water, Colorado rears the summits of her mountains to the clouds, and solicits and receives therefrom the rain and snow from which she feeds the great rivers, which, grouping their sources in the center of her boundaries, course thence to the north and south, the east and west, inviting in every direction that union with the soil which it is the province of man to effect and profit by.



In the early territorial days it was the Mexican population of the south which purchased from the thirsty soil its birthright for a little water. This water was conveyed to the land in small channels, irregular in section, fall and alignment. These channels were seldom carried above the highest level of the low bottom lands immediately adjoining the streams, and usually wound around the toe of the slope of the high adjacent lands. From these humble constructions, with but a few square feet of cross-section, step by step, with the advent into the state of each increment of energy, skilled labor and wealth, Colorado has seen her irrigating canals multiply in numbers, and with more and more perfection of construction, develop into great channels, some of which carry a body of water 70 feet wide and 6 feet deep, far out onto the rich mesa lands.

Since that period when the pioneers found within the confines of Colorado, but a few miles of irrigating ditches, and, at the most, but several thousand acres of cultivated lands, three decades are drawing to a close; but such has been the progress of irrigation development in the state during that period, that water in 4,000 miles of ditches, holding sway over 2,000,000 of acres of lands, is accounted to its credit.

That energy which has accomplished so much seems undiminished in strength and purpose, and to aim at no less an achievement than the economic use of all of the waters of the state in the irrigation of lands. How much land can then be irrigated? is an unsolved problem. There enter into the consideration thereof so many unknown quantities and variable functions, that it is carried beyond the sphere of calculation. The only solution of the problem would seem to be a practical one; yet year by year, as irrigation statistics are gathered and assimilated, the estimates of the area of land which can eventually be brought under cultivation will the more nearly approach the truth. As perhaps of interest in themselves, as well as indicative that the supply of water in Colorado is sufficient, if made to supplement properly the rain-fall, to bring under cultivation no inconsiderable portion of the lands of the state, the following facts are presented, prefaced by the statement, however, that though drawn from the best sources of information attainable, they can only, with one or two exceptions, be considered as close approximations to the truth, and are only called facts by courtesy. As the waters falling west of the Continental Divide cannot, to any considerable extent, be brought to the east thereof, the portions of the state separated by the Divide, offer separate problems for consideration.

On the west of the Continental Divide it is found:

That the area of mountain lands is.....	16,360,000 acres.
That the mean annual precipitation over that area is.....	33 inches.
That the area of plateaus and rolling and valley lands is... ..	9,400,000 acres.
That the mean annual precipitation over that area is.....	10.70 inches.

That the total area is.....25,760,000 acres.  
 That the mean annual precipitation would average for that area. .25 inches.

On the east of the Continental Divide it is found:

That the area of mountain lands is.....10,200,000 acres.  
 That the mean annual precipitation over that area is.....30 inches.  
 That the area of plains and rolling and valley lands is....30,600,000 acres.  
 That the mean annual precipitation over that area is.....15 inches.  
 That the total area is.....40,800,000 acres.  
 That the mean annual precipitation would average for that area.18.7 inches.

Let it be considered in connection with the areas east of the Continental Divide, and with the precipitation thereover, that the limit of remunerative farming, without irrigation, is drawn at an annual precipitation of 22 inches; that the quantity of water passing through the canons of the Cache la Poudre River, as measured by this department in the year 1884, was equivalent to a precipitation of 13.367 inches over the entire water-shed of that stream above its canon; that the total precipitation over that water-shed, though not exactly known for that year, was about 33.4 inches; that about 40 per centum, then, of the snow and rain-fall over the water-shed of the Cache la Poudre River above the canon, flowed through the canon of that stream and was available for irrigation direct, or for storage for irrigation; that the application of this deduction to the precipitation over the entire area of the mountain lands east of the Continental Divide would indicate that about 40 per centum of the mean annual precipitation over that area would be the portion available for supplementing the rain and snow-fall on the irrigable lands east of the Divide, and that this would, if it could all be utilized and evenly distributed, afford with the rain-fall a mean annual depth of water of 27 inches over 10,200,000 acres of plains and valley land.

But it is evident on the one hand that the water of the streams could not, by reason of the contour of the country, be quite equally distributed; that a considerable portion of the water drawn from the streams for direct irrigation, as well as that stored in reservoirs, is lost by evaporation and seepage before it is placed upon the land, while a portion of the water in the streams themselves is by the same cause dissipated. On the other hand, it should be borne in mind that much of the water drawn from the streams near their sources, or canons, and carried in ditches and distributed to the land, returns to the streams directly, or by percolation, and can be drawn therefrom again by ditches diverting water below, and thus portions of the water of a stream be used for irrigation several, perhaps many times; that much of the observed loss in reservoirs, through seepage, returns to the water courses and may be diverted therefrom; that while the annual rain-fall estimated as necessary to the profitable raising of crops without irrigation falls at haphazard times, irrigation works enable the cultivator of the

soil to apply water to his crops at the times when they most need it; that less water, on some lands and with some crops at any rate, is needed for irrigation after the first few years of application of water thereto, and that the rain-fall on that belt of the plains near the base of the mountains furnishes some water to the streams, not accounted for in their estimated discharge at their canons, which can be used on the lower lands to the east.

These considerations are not repeated in connection with the western portion of Colorado. A glance at the statements given and relating to that portion of the state indicates that the ratio of mountains to the plateau and valley lands is much greater there than is the case east of the Divide, and that the water supply there, notwithstanding the light rain-fall on the plateaus and in the valleys is greater, both actually and in proportion to the needs thereof, than in the eastern portion of Colorado. While this brief review of the natural conditions governing irrigation development in Colorado shows that any attempt to foretell accurately the area of the land in the state which may be brought under irrigation must be fruitless, a conclusion rendered more apparent when it is recognized that the annual precipitation, both in the mountains and on the plains, varies greatly; it, nevertheless, plainly supports the confidence that the achievement aimed at by her people will make of Colorado a great agricultural commonwealth.

But, however energetic her people may have been, however skillful in construction and fruitful in resources, it was in the legislative halls, and the court rooms that they fostered best Colorado's wonderful development in irrigation enterprises. This is not to be considered, however, as indicating that the irrigating laws of the state are by any means perfect, or complete, or that the actions of the courts have been universally satisfactory. Indeed, more matters of importance in connection with this art of irrigation are now demanding attention at the hands of the law makers of Colorado than has been the case at any previous period. But the demand is now for a systematic arrangement of the laws, the extension thereof, and the modification of those enactments which are not clearly consistent with the fundamental doctrines of the courts governing the use of water for irrigation in the State.

The result of the agitation of the subject of irrigation about one year ago was a reservoir convention in Denver in March, 1888, at which the subject was discussed and resolutions passed, which were the direct cause of the National Government taking hold of the subject. Major Powell was directed by Congress to view proposed sites for reservoirs in the Rocky Mountain region and report to that body the practicability, etc., of the same. His report appears in the appendix (see index).

Col. Richard J. Hinton, under the direction of the Commissioner of Agriculture, Norman J. Coleman, compiled a mass of information regarding "Irrigation in the United States," which was printed in



pamphlet form at the Government Printing Office in 1887 and distributed throughout the arid region. The book is out of print and not obtainable from the department; it is a valuable treatise upon the subject, and should be reproduced with correct data to the present time. We look for Major Powell to get out a very exhaustive report upon the subject, probably in time to submit at the next session of Congress, and, in the Government's good time, be available to the hungry public, in book form, some time within the following year. Western Senators and Congressmen should insist upon an unlimited number of copies of that report being published for general information. The public in general are entirely ignorant of what irrigation is, its benefits, its utility and its delights. Why not delightful? We have seen old crusty farmers in Illinois, in drought years, who would have been delighted if they could have opened a flood-gate from an irrigating ditch and saved their withering crops and parched meadows. Yes, we believe they would have stopped shaking with ague long enough to have smiled at their independence of old Prob. or the clerk of the weather.

Irrigation is not so expensive as is generally believed. The average cost to construct canals in Colorado is about \$1.50 per acre of ground thus reclaimed. The annual cost of putting the water on the land is about \$2 per acre, which includes needed repairs of ditch and cost of water; therefore a farmer in Illinois who raises about one good crop in three, owing to either drought or flood could afford to give away his Illinois farm to secure one in Colorado. Let us compare Illinois' yield and prices in farmer's hands with Colorado, the following taken from United States reports for crops of 1886:

ILLINOIS.			COLORADO.	
Product.	Bushels per Acre.	Price per Bushel.	Bushels per Acre.	Price per Bushel.
Indian Corn.....	24.5	\$ .31	31.5	\$ .50
Wheat .....	13.7	.69	19.8	.70
Rye.....	12.	.57	22.	.72
Oats .....	31.8	.26	33.	.42
Barley .....	23.	.52	28.1	.62

About one-half of the agricultural area included in above averages of Colorado yield per acre is without irrigation. Irrigated fields average a yield of from 50 to 100 per cent. greater than the above table, and would bring the balance much greater in Colorado's favor; by the table, however, the average gain by farming in Colorado over Illinois, is shown to be 5 bushels per acre, at an average value of 50 cents per bushel; \$2.50 and 14 cents per bushel on the amount of product, which averages 21 bushels per acre, making a difference in price in

favor of Colorado of \$2.94, to be added to the \$2.50, makes approximately \$5.00 per acre per annum in favor of the Colorado farmer in yield and price; in addition, he has absolute certainty of a crop each year, with only \$2.00 per acre to charge up against Colorado for cost of irrigation, leaving a net gain of \$3.00 per acre per annum, besides the healthiest climate in the world to live in.

The land can be obtained at government price and terms in many instances, in others it may be purchased, all rights attached, at \$10 per acre. No fear of the home market being over-stocked; the mining and industrial interests are rapidly increasing, and the health-seeking population is rapidly improving, all much out of proportion to the increase of farms and farmers.

Grain, provisions, fruit and berries are mainly shipped in from other states; even hay, chickens and eggs are largely imported.

Denver is the best market for all the above farm products of any city in America of less than 200,000 population; for statistics in support of which we cite you to the article on Denver, later on in this work.

Col. Hinton, in his report before referred to, estimates the arid region of the United States to be 1,000,000 square miles, one-third of the entire area of the United States, exclusive of Alaska, one-half of which is mountainous, and incapable of being cultivated, owing to its altitude, or nearly perpendicular sides. This vast area, however, receives more than its proportionate share of annual precipitation by natural humidity, twice to three times, and the water only requires to be properly stored and distributed to furnish an abundance to reclaim the other 500,000 square miles. The mountain region is valuable for grazing, coal and precious metals, which, in value of annual production, exceeds the same area in agriculture, and is capable of employing a much larger population.

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## SHENANDOAH VALLEY.

**S**ITUATE in the southwestern portion of Montrose, and the northern portion of San Miguel counties, Colorado, and just south of the San Miguel river, lies a tract of rich arable land, embracing about 20,000 acres. This is the Shenandoah Valley. It stands unparalleled for agricultural, horticultural, cereal and vegetable pursuits. It lies between the 38th and 39th degrees of latitude, being further south than the world-renowned climate of Naples, in Italy, or the extreme southern portions of Maryland and Illinois, and the central portions of Virginia and Kentucky, in our own country. Its winters are genial, equitable, and tempered with mildness; its summers fanned by the cooling breezes from the mountains, that tower thousands of feet

above it, which render the nights simply perfect for healthful and unbroken rest.

#### ITS SOIL AND FERTILITY.

The soil of this valley is of a reddish brown to a deep red; is of great depth, and very rich and tractable. The whole valley is the scene of an ancient ocean, and the deposits precipitated has given to it the greatest fertility. Analysis shows it to be richly endowed with all the mineral constituents necessary to the highest growth of all the cereal, fruit and vegetable products, which for quality and texture stand unrivalled.

The skies are seldom overcast with clouds; it is truly called a land of perpetual sunshine. The yearly rain-fall averages less than 10 inches, being but one-fifth to one-quarter precipitated in the eastern and northern states. One can safely count on 325 clear and fair days in each year. The mean annual temperature averages 56 degrees. That of the spring 51 degrees; summer, 75 degrees; autumn, 53 degrees; winter, 39 degrees.

While farming land in the East, which requires a large amount of fertilizing and labor to make it productive, sells from \$25 to \$150 per acre and upwards, this 20,000 acre tract is open to location under the Homestead and Pre-emption Laws of the United States Government.

By either of the above-mentioned plans one can procure title to as fine a farm as the world possesses, at a little or no expense. The title issuing direct from the Government insures peaceful possession forever afterwards.

The Naturita Ditch Company has adopted decidedly the safest and most liberal methods yet offered in Colorado for purchasing irrigation rights, the title to which shall remain forever with the purchaser, with full power to bargain, sell and convey the same away whenever he shall so select.

The farmers, under this plan, elect their own Board of Directors, which looks after the affairs and makes rules, which are just and equitable to all.

This precludes any grievances to adjust, as each gets just the proportion of water he has purchased.

One hundred inches of water is ample to supply 160 acre farm. This amount insures, with absolute certainty, the best growth and yield of crops upon the entire 160 acre tract.

The company sells to the locator this 100 inches of water for \$1,500, requiring but from \$200 to \$300 for the first payment—the balance to be paid in equal installments extending through a series of eight to nine years, the deferred payments to bear but 6 percent. annual interest. Any locator, who so desires, may purchase a less amount of water than 100 inches, paying therefor at the rate of \$1.600 per 100 inches.



The country surrounding the Shenandoah Valley is, without exception, the sportsman's paradise. Thousands of acres of beautiful parks, studded with fine timber, surround the valley, where may be found in large herds black tail and other deer, and at no great distance beyond are found mountain sheep, grouse, quail, sage hens, etc., while the streams are alive with trout weighing from a few ounces to five pounds.

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## HORTICULTURE.

THE following contribution to the EXCHANGE JOURNAL by Doctor Alexander Shaw, Secretary to the State Horticultural Association is worthy of re-production, and will prove very interesting:

"The test of fruit culture as a success, by twenty-five years' trial, under the influence of irrigation, is fully demonstrated by the exhibits of fruits at our last three exhibits, held under the auspices of the Chamber of Commerce.

The members of the State Horticultural Society have made a careful and personal inspection of the state as to the adaptation of Colorado for fruit culture, either as to trees or small fruits. As to a condition precedent to success, no one is assured of success whose water for irrigation purposes is not at command. With water at command the climate of Colorado is admirably suited. The meteorological record of our signal station shows less extremes of heat and cold, and that Colorado is on the direct mean line of temperature of the North American Continent. The extremes of cold in many of the states north and east of Colorado for the last five winters has well nigh ruined their orchards; varieties hitherto supposed to be iron-clad have yielded to the rigor of their winters. In Colorado, the same varieties flourish and do well. The experience of orchardists justify planting many kinds, now abandoned by many of the older states. Many diseases incident specially to the culture of apples and pears, such as blight and fungus growth, are not known in Colorado.

Colorado is not under the necessity to hunt Russian Iron-clads, but can with impunity plant many of the old sorts with assurance of success. Actual inspection of varieties now growing in a healthy condition is about 200 in number. The oldest orchards in the state range from eighteen to twenty-five years; the largest orchards consisting of about 3,000 in bearing. This orchard produced in 1886 10,000 bushels of apples. Apple trees bear as prolific when of ordinary age as any country, and the crop is equally as sure. Casualties from late spring frosts are no more common than in any other country

where the apple is grown. No plantation of any extent of pears has been made; but where pears have been properly cared for, and of proper age, they are equally as prolific as apples. Apples and pears grow well in all parts of Colorado, from the extreme north to the south. Cherries and plums are found to grow in all parts of the state. The more tender varieties only flourish in the south and western slope of the Rocky Mountain range. As yet, peaches, nectarines, apricots and hard-shelled almonds are only successfully grown in the extreme south, in the valleys of the Gunnison and Grande Rivers. The Grande valley bids as fair for peach culture as Salt Lake, the altitude, 4,500 feet, being the same and the conditions for peach culture all right. Quite extensive orchards have been made; one venture numbers 12,000 trees. Small fruits, such as grapes in variety, raspberries and strawberries, gooseberries and currants, are exceptionally fine in all parts of the state. The system of culture by irrigation is particularly well adapted to small fruits. Water at command will discount the contingencies of countries dependent upon natural rainfall. The fruit growers of Colorado prefer to accept the conditions of culture by irrigation than the contingencies of natural rain-fall, calculating with more certainty upon a crop. The fruit grower of Colorado sums up the advantages of fruit raising by irrigation.

Crops thus cultivated are not subject to the uncertainty and vicissitudes pertaining to other regions.

To specify some of the advantages of irrigation we have:

First—Immunity from drouth.

Second—Freedom from excessive moisture and flood.

Third—The ability to cultivate any kind of plant permitted by the climate, from the aquatic or semi-aquatic to that needing the minimum amount of moisture.

Fourth—The ability to control, in a large measure, the growth of the plant, making it early or late as desired, and sometimes growing two crops of the same kind on the same land during the season.

Fifth—To control the condition of the soil, making it suitable for the plow or seed.

Sixth—To supply certain elements to the soil needed for plant food, namely: phosphates, sulphate and carbonate of lime, potash and soda salts, nitrogen, magnesia, etc., abundantly carried by the water of the mountain streams.

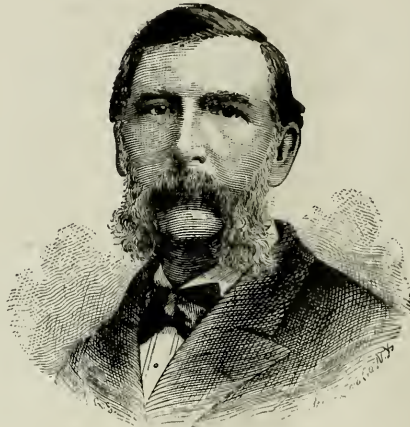
Seventh—To dissolve and wash out certain baneful ingredients of the soil that frequently exist in such excessive quantities as to destroy plant life.

Eighth—The most important advantage is the fertilizing deposit left by the waters, supplying a nutriment to the crop, and adding to and enriching the soil.

The very means of reclaiming the arid land is a constant source of its fertilization. By irrigation the pores of the most sterile soil can be

filled and compacted by the infiltration of the impalpable silt, and converted into a loam of prodigious fertility; hence, as a general statement, all lands that can be reached and supplied with water for irrigation are susceptible of cultivation."

Deeming fruit culture of such vast importance to the state, we add to Dr. Shaw's very able document an article on the same subject by W. E. Pabor, editor of the "State Horticultural Journal," as well as secretary of the State Editorial Association, and herewith present our readers with his portrait:



W. E. PABOR.

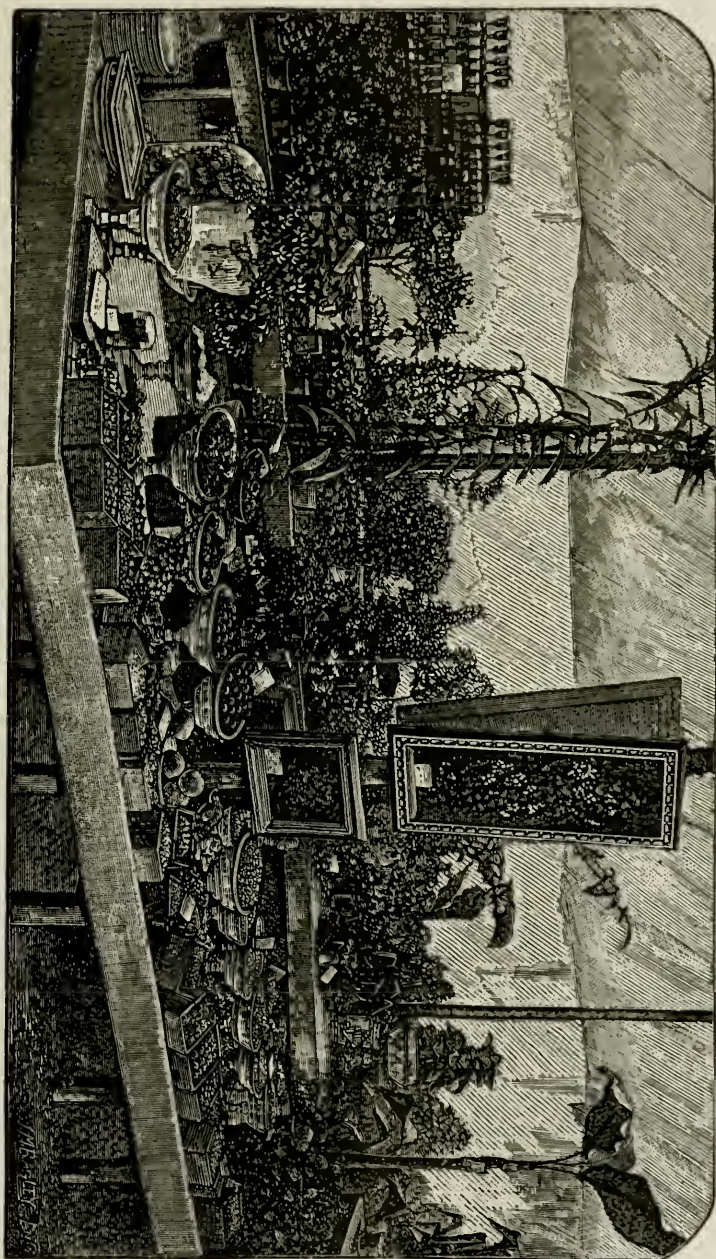
Mr. Pabor has resided in Colorado for many years, and owing to the many really beautiful poems he has written on Colorado scenery, he is familiarly called "Colorado's Poet." He has been active in aid of deep harbors on the Texas Gulf coast; was a delegate from the State Press Association to the initial convention at Fort Worth in July last; subsequently to the Inter-State Deep Harbor convention held at Denver in August last. He is now a resident of Fruita, in Grand county, Colorado, near the Utah line, where he has settled down to practical fruit culture.

The following article was contributed by Mr. Pabor to the March number of the "Commonwealth," a local (Denver) monthly magazine of great merit:

#### COLORADO FRUIT.

• We are learning slowly, but surely. Time and patience are stern teachers, but we must heed the lessons they present. It is not everywhere in Colorado that standard fruit will grow. The soil about Greeley does not seem to meet the conditions necessary for successful apple culture; yet twenty-five miles nearer the foot-hills, at Fort Collins, a fair measure of success is met with. The Valley of the Arkansas,





COLORADO FRUIT EXHIBIT.

The above cut is a section of a Colorado Fruit Exhibit made in 1887 at Denver.

from Pueblo to Canon City, seems to be the home of the apple. Nowhere in the state are there larger or more thrifty orchards. Limestone is abundant in the soil here, but lacking in the Valley of the Cache la Poudre. The White Ridge section about Denver is another instance. The apple reaches like proportions here. It would seem as though the belt extending twenty miles east from the foot-hills, from the northern to the southern boundary of the state, was specially fitted for the growth of the apple, the altitude varying from 4,500 to 5,500 feet above sea level. Yet, in far higher sections partial success has crowned the efforts of fruit growers. In the Valley of the Mancos, over 7,000 feet high; in San Luis Valley, and the section about Del Norte, 1,000 feet higher, apple trees are growing. We doubt their permanent success in the great San Luis Park. It is the bed of an ancient lake, and the soil beneath the surface, as a rule, is gravelly and not over strong. In the Gunnison County proper, where the altitude averages over 8,000 feet, a few apple trees are growing, and it may be assumed that the early-ripening varieties may be cultivated; but no great orchards may be expected at such a height.

As with the apple, so with the pear and the plum; the belt above described seems favorable to their growth. They flourish best, however, in heavy, adobe soil, and about Canon City can be found, on the north side of the river, some pear plantations showing wonderful vigor of stem and healthy vitality. The plum, growing wild as it does in our mountain districts, is beginning to be largely planted.

The sweet cherry will not grow here, judging from the results thus far made public. Such varieties as the Early Richmond and the English Morello are finding lodgment; but the cherry for Colorado is a fruit of the future, as is its successful propagator. It is possible that the quince may be grown, but too little is known to venture an opinion upon it.

The vine flourishes everywhere, and the fruit of the grape seems likely to be common in the land. From the hilltops to the plains, stretching far out to the east, no home garden need be without its "vines, yielding grapes." As to varieties there are many and varying opinions. Some are suited to sandy soil; some are better adapted to the heaviest land. When an acre of grape vines can be made to yield \$1,000 worth of fruit, it becomes a question of interest to owners of small tracts to investigate the subject. We would not dare to put this sum on record to be questioned as to its accuracy, had we not seen the figures in the expense book of a Canon City fruit grower who, in the year 1887, sold that amount of grapes off an acre patch. But facts are stubborn things to overcome. It may not be that every one growing grapes will be so fortunate. Indeed, even the most experienced must be prepared for "off years," for the most uncertain thing in Colorado is its climate, and no one year can be taken as a type of another one to follow. For instance, last year the grape crop generally



was a failure all over Colorado by reason of May frosts. We are a fortunate people, in soil culture, in many respects—far more so than our brothers in the East; but even here, to paraphrase an old chicken adage, we cannot count our bunches of grapes before the fruit is safely set. Thus far we have taken only the eastern slope of the mountains into consideration. But the new empire upon the western slope demands attention at our hands.

Only seven years have passed away since this new empire was opened up, by Congress passing the bill removing the Utes from the vast reservation on our western borders. The eye of man—civilized man—had for many years turned longingly and lovingly toward the magnificent stretches of valley lands in the Gunnison, the Uncompahgre and the Grand Valleys. Warmed by the balmy breezes of the Pacific; watered by rivers greater than any known on the eastern slope; with mountains full of valuable minerals; with parks unexcelled for pasture; with intervalles, sheltered from storms, suited to vineyards and orchards; with long sweeps of valley lands, only waiting for the coming of the thrifty farmer to be changed into wheat fields; with timbered mesas, where tree-girths showed a half century's growth—is there any wonder that the feet of expectant prospectors and pioneers waited uneasily on the border-land, eager to tread the country so rich in promise?

The town-builder and the railroad, the farmer and the miner, soon entered into possession of the coveted heritage. Montrose, Delta, and Grand Junction became names known throughout the state. The canal builder followed, and a million of dollars were expended in constructing irrigating canals, supplied by the streams already named. Similarity of soil, of climate and of altitude to the valleys in Utah where fruit grew to perfection, led those whose taste in soil culture lay in that direction, to believe that in Delta, Montrose and Mesa counties fruit would grow, such as had not succeeded elsewhere in Colorado. It might be, it was argued, that there the peach and the apricot, the nectarine and the almond, the fig and the sweet cherry, might find congenial soil, and an industry equal to that developed in California become established. If the peach grew in the Valley of the Jordan, in Utah, at an altitude of 4,200 feet, would it not also grow in Grand Valley, in Colorado, having the same height above sea level?

It was a question in which all fruit-growers were interested. If successfully solved, it would result in keeping millions of dollars annually in the state, instead of sending it to fill the pockets of California and Utah horticulturists. From a commercial point of view it was solved; so at Paonia, in Delta county, at Fruita, in Mesa county, and other points, in a short time orchards were set out and vineyards planted. On hundreds of farms a few fruit trees were set, and the voice of the tree peddler was heard in the land so recently rescued from the dominion of the savage.



Two or three years passed; then, from over the range, came whispers that the pink blossoms upon the almond tree and the peach had been seen, making progress in a new line of fruit culture. In vain had such efforts been made in the older settled counties in eastern Colorado. In addition, it was said that the grapes that grew in California also took kindly to the soil of Grand Valley. If so, had not a new page been turned, in whose reading could be traced added wealth to the Commonwealth.

As the summer waned and the season of exposition opened, there appeared upon the exposition tables, in Denver and elsewhere, the bloom of the cotton plant, the sweet potato, the peanut, the peach, the apricot, the almond. From whence came they? From sheltered nooks in the mountains, and from the valley of the Grand River, where a million acres lay in the warmth and sunshine, ready to be transformed into farm lands, orchards and vineyards. It was difficult to make the multitude believe that the stories told were true; of peach trees four years from the seed planting, bearing fruit, and so delicious in flavor, so royal in blossom, so splendid in size, that one seemed in the eating to be standing on peach land in Delaware. But some branches of the trees accompanied the fruit, and seeing could not help believing.

The official record showed that: "Fruita, Mesa county, made a general exhibit of produce grown in Grand Valley, 436 miles southwest of Denver. The exhibit included peaches, apricots and grapes. In the general exhibit was shown hard-shelled almonds, Spanish peanuts, coffee peas, Kaffir corn, castor oil beans, chuefas, Chili squash, carrots, sweet potatoes, broom corn, many varieties of pumpkins, popcorn, wheat, oats, rye, barley, Russian sunflowers, mangel wurtzels, Golden, Tankard & Lane's sugar beets, potatoes, Brazilian or flour corn, Colorado dent corn, cotton plant, sweet corn, onions, watermelons, golden beauty corn, stalks of sorghum, branches of grape vine, branches of apricot, peach, almond, mulberry and olive tree showing one season's growth."

To-day there are at least 100 acres of peach trees within a mile of the little town of Fruita, in the heart of Grand Valley—the finest, the largest, the best watered, the most favored in soil and climate of the valleys in western Colorado. There are 40,000 acres under a canal system already, and when a half million of dollars can be had to construct another, at least 250,000 acres, stretching over the border into Utah, can be made to bloom and blossom as the rose. The fact forces itself upon the mind that western Colorado is to be the great fruit producing section of the state. For not alone do the peach and apricot seem to flourish, but the pear, the apple, the plum, the cherry, the foreign as well as the native varieties of grapes and the whole range of berries and small fruits seem to prosper in the warm, rich soils of Delta, Montrose and Mesa counties. Further south, at the extreme limit of the state, in La Plata County, like conditions prevail, tem-

pered somewhat by higher altitude. In far-away Montezuma Valley the enthusiast believes he has found the Garden of Eden, though we do not remember ever reading of frosts in June prevailing in Adam's first abiding place, though mention of the apple may readily be recalled.

Eastern Colorado will grow the apple and the grape; in the near future large orchards and vineyards will jut out from the foot-hills in the valleys of the Cache la Poudre, Boulder, South Platte, Clear Creek, Arkansas and the Purgatoire. But larger still, and with greater variety of fruit, will be the orchard lands and vineyards in Western Colorado, on the slopes between the three great rivers rising in the San Juan and in the North Park, and resting only from their rapid motion when, uniting with Green River to form the Rio Colorado of the West, they fall peacefully into the bosom of the Gulf of California.

## CLIMATE.

THE climate of Colorado is varied, owing to altitude and shelter of the mountains and ranges in winter, from mild in low altitudes sheltered by mountains, to extremely severe in high altitudes unprotected. The actual difference within a hundred miles in temperature in winter, is frequently 60 degrees. The telegrams to eastern papers from Colorado often quote the temperature at from 40 to 50 degrees below zero. This is taken from some exposed point, probably 10,000 feet above sea level, the distinction being rarely noted, and throughout the east Colorado is looked upon as a frigid climate in winter, when the reverse is the case. In the valleys and along the foot-hills the thermometer rarely falls below zero, and in summer rarely rises above 90 degrees. In our article on Denver, and on Colorado Springs following, we give more of a detail regarding climate, which may be considered as a fair average for the state. The following table of altitudes will give the reader an idea of the difference of temperature, at the same time of observation:

ALTITUDES ABOVE THE SEA.

	FEET.		FEET.
Argentine Pass.....	13,000	Middle Park .....	8,000
Breckenridge Pass .....	11,800	Mt. Lincoln .....	14,183
Canon City .....	4,700	Ouray .....	6,000
Colorado Springs.....	5,915	Pagosa Springs.....	6,800
Denver .....	5,364	Pike's Peak .....	14,336
Fort Garland.....	9,764	Pueblo .....	4,400
Georgetown.....	8,466	Sangre de Cristo .....	9,395
Gray's Peak .....	14,566	Sierro Blanco Peak.....	14,402
Greeley .....	4,779	South Park .....	9,842
Leadville .....	10,025	Uncompahgre Mountains.....	14,540
Long's Peak .....	14,300	Veta Pass.....	9,339
Manitou .....	6,124		

## AGRICULTURE.

**C**OLORADO'S agricultural possibilities have never been fully tested, as far, however, as experiments have been made success has exceeded expectations. As we presently show, in 1886, Colorado had in field crops 332,018 acres. The article on irrigation which preceded this, gives the area of irrigated lands at this time to be 2,000,000 acres. Colorado crops in 1886 were as follows: 29,778 acres, producing 938,000 bushels of corn, valued at \$469,000; 122,152 acres, producing 2,419,000 bushels of wheat, valued at \$1,693,300; 1,909 acres, producing 42,000 bushels of rye, valued at \$30,240; 48,207 acres, producing 1,591,000 bushels of oats, valued at \$668,220; 6,876 acres, producing 193,000 bushels of barley, valued at \$119,660; 8,096 acres, producing 631,000 bushels of potatoes, valued at \$359,670; and 115,000 tons of hay, valued at \$1,127,000, making a total of 332,018 acres, producing in value \$4,467,090; or each acre yielding in value \$13.45, a greater yield per acre than any state in the Union; Ohio ranking next, with a yield per acre amounting to \$11.40.

Colorado consumes largely in excess of her agricultural product, and has furnished a splendid market for the surplus product of Western Nebraska and Kansas; and with the millions of acres awaiting the plow in Colorado, with full water rights, we cannot see why this state will not attract a large farming population. The farm and mineral lands of the state are so equitably distributed that each support the other, and never will the state be an exporter of anything except gold, silver, lead, copper, zinc, iron, coal and oil; the workers in which must be supplied with food and raiment by the farmer.

We now turn to Colorado's live stock industry. January 1st, 1888, the state contained 127,483 head of horses, valued at \$7,437,086; 8,247 head of mules, valued at \$759,697; 63,023 head of milch cows, valued at \$2,345,086; 1,049,353 head of oxen and other cattle, valued at \$20,918,327; 1,137,686 head of sheep, valued at \$2,257,169; and 23,149 head of hogs, valued at \$153,103; a total of 2,409,211 head of live stock, valued at \$33,810,468; which, added to the agricultural output, makes a grand total of farm products, January 1st, 1888, aggregating \$38,337,558; add to this the metal, coal and oil output—metals, gold, silver, lead and copper, \$34,500,000; iron, \$2,000,000; coal, \$5,000,000; oil, \$500,000, and we have a grand total of produced wealth from native material.

From the late returns of the assessor, the total assessed valuation of the state May 1st, 1888, amounted to \$169,000,000, which represents but one-third of the actual value; therefore, Colorado one year ago contained \$507,000,000 of wealth, which has undoubtedly increased 20 per cent during the past year. Every dollar of that vast sum has either been dug out of the mountains, or has been made from the



large herds that range the Colorado plains, or extracted from the soil by the sturdy husbandman.

Colorado's action in the movement for deep harbors on the Texas Gulf coast is the most disinterested of any western state, since she never hopes to have grain or provisions to export; home consumption will absorb all Colorado's grain product, the only export of value to the state is gold and silver. The Government purchases all of the gold in Denver. The silver, of course, is very valuable compared with weight, hence the bullion is all expressed east, to be absorbed in the arts, or in the United States mint, freight charges being of small consideration.

Deep Harbors on the Texas Gulf, however, will have the effect to build Denver up in the wholesale business, to rival Kansas City and Omaha, and generally benefit the whole state.

The late Colorado General Assembly, through the influence and perseverance of Senator Adair Wilson, appropriated \$2,500 to assist in paying the expenses of the Deep Harbor Committee. No other legislature contributed a dollar, not even Texas, where the people should be most interested.

The Colorado Committee on Deep Harbors is composed of exceptionally strong men, Ex-Governor John Evans being at the head; associated with him we find Ex-Governor Alva Adams; State Senator Adair Wilson; Hon. C. C. Davis, of Leadville; and Hon. W. S. Jackson, of Colorado Springs.

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## IMPORTANT CITIES OF COLORADO.

Denver, population, 130,000; Pueblo, 30,000; Leadville, 20,000; Colorado Springs, 12,000; Trinidad, 11,000; Aspen, 8,000; Boulder, 5,000; and numerous others of less than 5,000 inhabitants, but of considerable commercial importance, among which we mention Golden, Idaho Springs, Georgetown, Glenwood Springs, Greeley, Longmont, Fort Collins, Grand Junction, Fort Morgan, Akron, La Junta, Las Animas, Lamar, Walsenburg, Canon City, Salida, Buena Vista, Gunnison, Montrose, Ouray, Silverton, Telluride, Alamosa. and Durango.

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## STATE FINANCES.

A fitting close to our article on Colorado is an exhibit of the state finances, and we quote from the late reports of the State Auditor and Secretary of State:

### AUDITOR'S REPORT.

"From the last biennial report of the Auditor of State, the finances of the state are clearly epitomized, showing the total receipts and dis-

bursements for two years, ending November 30th, 1888, to have been: receipts, \$2,280,179.85 which, with the cash on hand December 1st, 1886, \$481,885.64, and cash invested in state warrants on that date, \$352,617.08, make a total of \$3,114,682.57. The total disbursements were \$1,721,830.31, which with cash invested in state warrants, \$575,047.92, and cash balance in treasury, \$817,804.34, make a total of \$3,114,682.57. The receipts by biennial terms from the admission of the state to the close of 1888, were as follows:

1877-78.....	\$ 307,893.53
1879-80.....	625,617.08
1881-82.....	953,286.60
1883-84.....	1,483,468.00
1885-86.....	1,837,395.24
1887-88.....	2,280,179.85

At last we have an intelligent and straight forward analysis of the state debt, and an explanation of the causes of its magnitude, which as a matter of fact is surprising to the tax-payer not much accustomed to investigating the disposition made of the public funds, and it will also be discovered that much of the indebtedness is due to the operation of imperfect laws, otherwise the license permitted by loosely worded statutes, perhaps designed to be liberally and not literally construed.

Auditor Kingsley, after making a brief reference to the statement of his predecessor, published in advance of the decision of the Supreme Court to the effect that only four mills on the dollar could be levied by the State Board of Equalization for all purposes, whereby that official proceeded on the theory that the general fund was entitled to a four mill tax, says the state debt November 30th, 1888, aggregated \$952,544.41, and only consisted of outstanding warrants drawn by direction of the legislature in its several appropriations against the general revenue fund, and bearing 6 per cent; certificates of indebtedness issued by direction of the Governor and Attorney General, bearing 6 per cent interest, and loco weed certificates unredeemed. In detail as follows:

Outstanding interest-bearing warrants.....	\$839,824.17
Certificates of indebtedness .....	86,879.10
Loco weed certificates .....	31,363.00
Total.....	\$958,066.27
Less cash available .....	5,511.86
State debt November 30th, 1888 .....	\$952,554.41

As against this rather respectable debt for a state twelve years old, we have an offset in available delinquent taxes of \$435,160.38, leaving the debt in excess of revenue, November 30th, 1888, at \$517,394.03.

## ABSTRACT OF ASSESSMENT FOR YEARS 1887 AND 1888.

	1887.		1888.	
	NUMBER.	VALUATION.	NUMBER.	VALUATION.
Acres of land .....	6,697,915	\$ 17,035,180.88	9,343,539	\$ 29,896,028.50
Improvements on lands .....		16,762,937.13		11,155,210.50
Miles of railroad and value ....	2,954	25,412,039.02	3,739	31,240,602.11
Average value of merchandise .....		6,565,688.00		7,062,647.00
Amount of capital employed in manufactures.....		555,783.00		707,541.00
Town and city lots.....		48,431,436.50		60,722,365.00
Horses.....	151,084	5,157,430.00	170,056	5,611,690.00
Mules .....	7,637	465,379.00	10,452	523,886.00
Asses .....	2,327	29,233.00	1,002	9,340.00
Cattle .....	900,912	11,469,326.00	911,989	10,292,877.00
Sheep .....	795,592	862,877.00	747,679	751,377.00
Swine .....	15,181	46,288.50	16,236	50,165.00
Goats .....	11,008	11,012.00	10,403	10,617.00
All other animals .....	4,312	27,902.00	3,967	29,531.00
Musical instruments .....	4,523	388,121.50	5,685	426,708.00
Clocks and watches .....	11,565	205,765.00	13,253	215,820.00
Jewelry, gold and silver pate ..		58,349.00		66,303.00
Amount of money and credits ..		2,722,909.89		2,570,057.00
Carriages and vehicles .....	26,071	991,993.00	28,612	880,663.00
Household property .....		656,183.00		781,969.00
All other property .....		2,337,714.95		2,653,990.20
Bank stock and other shares ..		1,329,136.00		1,469,260.00
Mines.....				1,683,540.00
Grand total valuation of state .....		\$ 144,323,684.37		\$ 168,812,246.93

The state valuation, as shown by the assessment rolls, has been as follows:

1877.....	\$ 43,453,946.66
1878.....	43,072,648.26
1879.....	58,315,389.30
1880.....	73,698,746.29
1881.....	96,135,305.48
1882.....	104,440,683.57
1883.....	110,759,756.21
1884.....	115,675,014.51
1885.....	115,420,193.90
1886.....	124,269,710.06
1887.....	141,323,684.37
1888.....	168,812,246.93

## EXTRACT FROM REPORT OF SECRETARY OF STATE.

The revenue of the state from this office have been for the last two fiscal years nearly three times as much as for any two previous years in the history of Colorado. The receipts derived from this office, commencing with the admission of the state up to the time I came into office, amounted to \$52,259.60. During my term of office the revenue



for the two years, ending November 30th, 1888, has amounted to \$70,652.12. The amount is sufficient to pay the salaries of Secretary of State, his Deputy, and the salaries of the Governor and his Secretary, Treasurer of State and his Deputy, Auditor of State and his Deputy, Attorney General, School Superintendent and their Clerks; in short, it pays the full salaries of the Executive Department and their Deputies for the two years.

There are in the state 924 corporations for pecuniary gain, embracing 218 for mining and milling ores, 147 ditch and canal companies, and 559 miscellaneous associations. The capital stock of these various corporations amounts to \$373,742,485 divided as follows:

Mining and Milling Corporations.....	\$ 181,933,000
Ditch and Canal Corporations.....	22,474,995
Miscellaneous Corporations .....	269,329,490
	<hr/>
	\$373,742,485

## DENVER,

CAPITAL OF COLORADO AND ARAPAHOE COUNTY.

WE now approach a subject dear to our hearts, Denver, "the Queen City of the Plains," which, in its brief history, has outstripped the fondest hopes of its founders and excelled the wildest dreams of a Gilpin or an Evans. It has more than kept pace with the advance of this marvellous West. From a cabin in the Fall of 1858 it has grown to be a city of 140,000 human beings, unrivalled private residences, public and private schools, church edifices, public buildings and hostelrys.

In 1858 the Pike's Peak gold excitement caused a large immigration from the East to Colorado. The placer find in Cherry Creek, near the present center of Denver, caused a few to halt here on their mad rush for gold. General Larimer built a small log hut on the east bank of Cherry Creek, about where the City Hall now stands, and started a town, christening it St. Charles, while just across the creek there was a rival town started, called Auraria. Much jealousy existed between the two towns, which, after a little over a year, were consolidated and called Denver, after General G. W. Denver, then Governor of the Territory of Kansas, under Buchanan, President of the United States (afterwards a brave Union general). At this time Kansas Territory extended West to near where Leadville now is, and Denver was within that Territory up to 1861, when Kansas was admitted into the Union with present boundaries and Colorado Territory was formed out of what was a portion of Kansas, Nebraska, Utah and the unorganized territory ceded by Texas to the United States.

For ten years Denver had a hard struggle, then 1870, having 4,759 inhabitants. That year marked the turning point in Denver's favor, and the town in ten years more had grown to a city of 35,629. Population steadily increased, and in 1855 we find it 54,000. January 1st, 1888, it had grown to 96,000, and January 1st, 1889, careful returns show nearly 126,000, which, at this date, June 1st, 1889, has been swelled to the number of 140,000 (estimated), and it is estimated that from 2,500 to 3,000 is being added every month. We now predict that the national census of 1890 will reveal the fact that Denver has a population of 160,000, whereas one year ago our most sanguine expectations did not place the figures above 150,000.

Our predictions in the past regarding Denver have been verified by facts when the time came round, and, in fact, more, for in each case our expectations have been more than fulfilled.

In order to give a description of Denver we must visit North Denver and Highlands, so that we may obtain a bird's-eye view of the city.

#### NORTH DENVER.

Denver has beautiful surroundings, but it can be truly said that no division of this great city equals North Denver and Highlands in all the essentials that it requires to make a delightful residence portion of a great city. No city is perfect without delightful and sightly residence districts, and the North Side affords that absolute necessity. The North Side is not confined to that portion of the city which lies immediately north of the business portion of the city, but is generally understood to be all that portion of Denver which lies across or on the north side of the Platte River beginning at Argo on the north and extending round to Sheridan Heights or Military Post to the southwest. The North Side is the breathing spot for Denver, it being high above the business portion of the city and still very near; the extreme limit of the platted portion north of Barnum's addition, being within the three and one-half mile limit. It is high enough to be out of the smoke and dust of the city, away from its noise and bustle; recently made very accessible by the cable system; ten minutes is sufficient to take you from the center of this North Side to the business center of Denver.

Governor Evans and his associates are to be thanked for bringing this beautiful division of Denver into close connection with the city. The building of the cable has stimulated Colonel Randolph to put on better horse-car service for the North Side. Heretofore the North Side has been dependent upon the one horse system, with cars at long intervals, all overcrowded and insufficient. When the cable began to build, Captain Randolph was compelled to put on two horses and extend out Clear Creek avenue, extend his other lines and otherwise improve his system. To-day the North Side is accessible by three horse car lines and one cable line. With a new cable line building to cross on the proposed Sixteenth street viaduct, then almost every foot of the North Side will be within one or two blocks of a street car and within ten to twenty minutes' ride of the very center of Denver.

Is there any wonder the North Side has received a greater impetus in real estate values and transactions than almost any other division? Is it any wonder that some of our wealthiest business men are making arrangements to erect palatial homes on the North Side? Some have already anticipated the advent of rapid transit, and their handsome residences may be seen dotting the hillsides of this delightful place, which residences, in style of architecture, grounds, etc., vie with Capitol Hill for comfort and beauty.

The Clear Creek avenue car line is quite appropriately named the scenic route, owing to the beautiful views obtainable from the car



windows. The line traverses the crest of the heights which overlook the city and affords a strikingly beautiful view of the mountains.

Denver is having a phenomenal growth, and will soon be a Chicago; then will her North Side be all that Chicago's North Side means to her. The North Side is nearer to the mountains, and, being higher than the main portion of the city, presents that which no other portion of Denver boasts of, an unobstructed view of Long's Peak, Gray's Peak, Pike's Peak and the intervening range of mountains, which opens up to the beholder a panorama of grandeur not obtainable elsewhere in the world—nature's constructed canvas, touched with nature's colors by the hand of nature's God, and constructed upon that magnificent scale in which the Creator does all things—a panorama 150 miles in length, by height that reaches to the heavens; pen can picture no more beautiful picture than the long stretch of mountains, with their snow-crested peaks piercing the heavens, glistening in the sunbeams or from the grand and beautiful to the awful, enveloped in clouds that circle, meet, and ascend in great whirls amidst the lightning's flash and roar of nature's artillery. Nothing we say can be more interesting except it be the same panorama by moonlight and starlight; then it assumes the sublime. Just imagine seeing by moonlight this vast panorama, the three peaks only visible—Pike's Peak, seventy-five miles distant; Gray's Peak, fifty miles distant, and Long's Peak, eighty miles distant. There they stand, silent sentinels, keeping a night watch over this grand and beautiful city, and there they will stand watch until they shall see Denver the greatest and grandest city on the continent. The stars, in their natural course, kiss the foreheads of these silent sentinels ere they pass from our view, and, nestling in among the mountain peaks, resemble beacon or signal lights which these silent sentinels display at the various watches of the night.

This might well be called the "Rifted Cloud City," since for fifteen months, from October 30th, 1879, to February 5th, 1881, no cloud overspread Denver so dense that the sun did not find a rift therein sometime during each day and smile upon this beautiful city; all but fifty-four days were absolutely cloudless.

Turning from this magnificent panorama we observe another picture; busy, bustling Denver, Queen City of the Plains, lies at the very feet of the North Side, with her hundreds of factories, smelters and machine shops, with their tall and shapely smoke-stacks belching forth their smoke and flame, visible evidence of the thousands there employed busily constructing the drill, pick and shovel for the miner; the car, rails and hoist for the shaft or tunnel operator; the concentrating machinery and smelter appliances, and lastly, turning out the precious metals in bricks of silver and gold.

Happy, then, are the dwellers of the North Side to be high above this smoke and dust, breathing fresh, pure air from the mountains.

Manufacturing is only one of the sights to be seen on the city side of this favored locality; beyond the manufactories arise in their grandeur great piles of brick and stone in shapely modern business blocks, five to eight and nine stories high, pointing heavenward as if to vie with those magnificent stone piles to the westward erected by the Master Builder of the universe. Close upon the business blocks comes Denver's unsurpassed school and church edifices, monuments of progress and morality; extending the vision still further, we view the elegant homes of our cattle and silver kings, and gradually our eye rests upon the boundless plains stretching southward and eastward as far as the vision can reach, resembling the mighty ocean, the gradual undulations resembling the waves and the swell of the real ocean. The first navigator, with his prairie schooner, was as truly a discoverer as Columbus when he discovered America; this prairie schooner captain discovered a new America, a mighty empire, that is destined to rule the nation and furnish wealth for the world.

Denver furnished the seaport for the prairie schooner, seated as she is at the westernmost shore of this once desert ocean, now turned into a fertile plain by the revolution produced by human energy, steam and electricity. The advent of railroads did not disturb the law which designated Denver the entrepot for all supplies to this vast rocky mountain region. Denver retains her giant grip upon the commerce of this vast territory, and will grow to be the capital of this new America, or, as it is generally termed in the East, "the trans-Mississippi country." It can to-day almost be said that Denver is the seat of wealth, literature, art and science of this mighty empire—consequently, its social center; the prediction is no exaggeration, but is fully justified by the facts.

A new Denver is being formed from one of its component parts, namely, the North Side. Already business has been crowded along Fifteenth street northward until it has passed the bridge, and has become firmly planted on the north side of the river, where a center is forming from which a mighty mart will spring. The North Side now has about 100 business houses, about 3,000 residences, four public schools, one, the High school, the pride of North Denver. We produce a cut of the building, which will give the reader a fair idea of its magnificent proportions. Eleven churches; Highlands Town Hall, hose and engine houses sufficient for protection from fire.

Highlands has a separate town government; however, it is a part of North Denver. They have their mayor and town board, own their water works, and are now about to light their town by electricity. The town government is in the hands of able, patriotic men.

The North side has about 20,000 population, and is rapidly increasing. There is room for a city on that side as large as Chicago. It is quite remarkable, considering the superiority of the location, that the whole of Denver is not west and north of the Platte. The

only valid reason is, that in the early days of Denver the inhabitants chose lower ground near the river, so that water could be easier led into the city from the river for domestic and manufacturing purposes. Irrigation was not then thought of in Colorado.

Along the Platte, like most rivers, one bank is bluff and high, while the other is flat, or slightly inclined. The North Side is on that side which is bold and bluff, and therefore is the natural location for a city. It is better, however, that Denver has grown just as it has and left this beautiful side for residences. With its beautiful valleys and hills it is picturesque and healthful. The drives, or streets, especially in Highland Park addition, are irregular, winding around in conformity to the lay of the ground and with exact deference to the improvement of building sites. Almost the entire portion of the north side known as North Denver which lies nearest the river around Fifteenth and Sixteenth streets will be business property.

The increase of population on the North Side has already compelled the erection of a large number of blocks, which are promptly occupied as soon as erected. All the merchants claim to be doing a large and increasing business, while several real estate firms have opened up business on Fifteenth and Platte streets.

The North Side is none behind other portions of the city for schools, for which Denver is so justly famed. A High school building just completed, cost \$75,000, is an ornament and a pride to the city. The reader can judge of the appearance of such a building upon the most prominent hill top in Denver, in full view from all trains entering Denver from the South and West. The grounds are beautiful, the plot being four acres in extent. Such a school building almost anywhere in the East would cost double the money. Our public buildings are the marvel of every visitor, owing to their grand proportions and cheap construction. Passengers coming in from the South and seeing this magnificent High school building perched upon the heights of the North Side, often enquire if it is not the State House, and no wonder they do so, for, in proportions and prominence, it vies with many Eastern capitols. Besides this High school, the North Side boasts of three well regulated and pretentious ward schools. Also, the Jesuit College, just completed, costing \$300,000, and the Catholic Orphan School for boys.

The Sisters of Loretto will soon begin the erection upon their twenty-acre tract of a large female academy. Altogether, then, the North Side, in proportion to population, can boast of the best educational advantages.

The Berkeley Motor is making regular trips every twenty minutes from the cable terminns to Berkeley Lake, passing through a most delightful valley and through well built and highly beautified additions, laid out particularly with a view to furnishing desirable residence spots for the wealthy, medium and humble classes, necessary



breathing spots for a large city. The beautiful valleys and improved gardens, orchards, etc., of this side are only to be compared with the most delightful of New England farm districts, quite as well kept, with advantages of delightful scenery and a health-giving atmosphere, with a climate to be compared only with Italy.

We have still one other motor line on the North Side. It is the Highland Company, which is also running cars every twenty minutes from the terminus of the cable road to Jesuit College. Its course lies in no less happy surroundings than the Berkeley line. Both lines may be said to be a decided help to the North Side "boom" which is setting in.

Denver as a city has never boomed, and we pray it never will; but there are divisions from local causes, that have partaken of some of the features of a boom; the North Side never, until now. We can see before us such a growth for the North Side as the south and east portions of the city have had for the past two years.

When Colonel Randolph shall have completed his viaduct on Sixteenth street and run his cable line system through North Denver and Highlands round on to the Boulevard, who is there that would venture a prediction upon the possible effect it will have upon the North Side? It will be literally netted with street car lines, and a person will scarcely be able to build so that he would be more than one block from a street car line, except he goes away out with a view to avoiding these modernizers.

The Tramway Cable Company also contemplate reaching the North Side via Colfax avenue and the Boulevard. They have already commenced construction on Lawrence street to build west through Lincoln Park to Villa Park and Barnum's addition.

A rapid transit elevated railway company have just received right of way over Holladay street to the City Hall from Villa Park and Barnum's addition, which opens up one more avenue to the North Side. Summed up, the completed and contemplated lines of rapid transit to the North Side places it in the rank of the most accessible residence property in the market, and at prices nearly one-half of that being paid for property same distance from the Postoffice in any other portion of the city. Then, is it any wonder North Side property is being sought after by investors and home seekers.

Arrangements are made so that one five cent fare will take the passenger on the cable line from the center of the city, or *vice versa*, a distance of six or seven miles, passengers being given a transfer by the conductors.

The horse car line was extended to the North Side, over Fifteenth street bridge, some years ago, and remained the only avenue for North Siders to reach the city until about one year ago, when Colonel Randolph extended his service to Argo over the Twenty-third street viaduct. Last spring public clamor upon the inadequate facilities ex-

tended to the North Side by Colonel Randolph, and the severe criticism showered upon the Colonel's one-horse bob-tail cars, caused the horse car company to open up a line on Clear Creek avenue and attach two horses thereto. The cars are handsome, new double-headers, and look like a step in the right direction. The Clear Creek line, owing to its running along the backbone of the North Side, affording a delightful view of the mountains on one side and busy Denver on the other, is styled the scenic line of Denver. The cable line has taken the place of the electric railway, owned by the tramway company. Both enterprises were conceived and carried out by that "grand old man," Governor John Evans, and his associate, Rodney Curtis. The electric railway was not a success; consequently, the more expensive and always reliable cable railway became a necessity. To-day we point to a cable system in operation second to none in America, in superior equipment and speed. Nine miles is the maximum per hour on Fifteenth, twelve miles on Colfax avenue and Broadway. In addition to the North Side connections made by this cable company, they connect in the extreme southeast of the city with the Colfax avenue motor, which extends east four miles on that street. The cable line also extends down Broadway south of the city limits to the old Exposition grounds. To return to our special subject. It only requires a visit to the North Side to see all its natural advantages as a residence portion. Here will be seen beautiful lakes, fast assuming shape of parks and resorts. Here is Sloan's lake, a sheet of water two miles in length by one mile in width. Nice groves are being planted, which will make this lake a popular resort; its proximity to the business center of Denver makes it very certain that ere long a large hotel will be built on the shores of this delightful lake; the nearest portion of the lake is but one and one-half miles from the Postoffice. The place for the hotel would be at the extreme west end. Street cars run now to within one mile of the lake; the cable line will run to the east end, and a steamer will be put on the lake to accommodate visitors.

#### RAPID ADVANCE.

Property has advanced very rapidly on the North Side, under the influence of the cable, motor and street car construction, completed and under way; property values have doubled in one year, and are still much below values in other portions of the city. The coming year will witness greater increase in values of property all over the city than any year ever witnessed before, and especially will that occur on the North Side, where it is confidently believed desirable property will treble inside of twelve months. Add to the present facilities for reaching the North Side the Fourteenth street viaduct almost completed, the Sixteenth street viaduct about to be commenced, the Colfax avenue viaduct contemplated and the completion of the city cable line over the Sixteenth street viaduct to North Denver, is sufficient to justify the expectations of the North Sider.



Mount of the Holy Cross,  
On the line of the Denver and  
Rio Grande Railway.

In long-forgotten Springs, when He who taught,  
Amid the olive groves of Syrian hills—  
Wayfaring by the blossom-bordered rills,  
From sparrow, fig-tree, vine—a lesson caught—  
He marked pure lillies which the sun had  
wrought,

In crucible whence molten gold distils.  
“Consider these,” He said, yet shadow fills—  
As of the coming Cross—His prophet-thought,  
It soon should deepen o’er the flower-full land,  
But when with passion past He death defied,

With living lilies was the dark cross spanned.  
The lilies bloom upon the prairie wide,

A stainless cross is reared by Nature’s hand,  
And plain and height alike keep Easter-tide.

M. V. DONAGHE.



## KING &amp; MCDOWELL.

In connection with North Denver, it is very proper to mention some of the moving spirits and enterprising citizens, who have built up that interesting division of this beautiful city.

Messrs. King & McDowell head the list of North Side promoters. Their real estate and investment business is very large, and ably managed; for years they have been singing the praises of their division of this city, the truth of which has lately dawned upon the public. While they own or control desirable property throughout the city, they make North Side property a specialty. Henry C. King, the head of the firm, was born near Bushnell, Ills., in 1844, where he resided until he entered Hedding College, at Abingdon. In 1863, he responded to his country's call for aid, and enlisted in the 137th Illinois regiment. At the close of the war he returned to Hedding College and resumed his studies, graduating from this institution in 1870; afterwards entering the Methodist ministry. In 1876, his health becoming impaired, he removed to Colorado, where he continued in the pulpit until 1882, when, by the advice of his physician, he reluctantly gave up the ministry to engage in less laborious pursuits. Naturally he chose the real estate business, as that would permit of his being out in the open air to a greater extent than almost any other occupation he might engage in.

Mr. King is a member of the School Board, which has just completed that handsome North Side High School building, which Mr. King is justly proud.

Mr. Harry S. McDowell, the junior member of the firm, was born in Altoona, Blair County, Pennsylvania, in the year 1858; was educated at Williamsport, (Pa), Seminary; after which he engaged in general merchandising in Altoona. Mr. McDowell came to Denver about seven years ago, and soon after associated himself with Mr. Henry C. King, in the real estate, insurance and investment businesses, under the firm name of "King & McDowell."

## GURLEY INVESTMENT COMPANY,

Composed of Gurley Bros., C. D. and R. A. Gurley, two substantial business men of Denver, who have had great faith in North Side property, and who have very large property interests in that direction. Their sales have been chiefly confined to improved property, they erecting houses on their vacant property for purchasers and receiving pay in monthly instalments, similar to the building association plan. During the past two or three years they have in this way assisted a large number of persons in becoming owners of their own homes.

The success of the Fourteenth street viaduct is due mainly to this firm, to C. D. Gurley especially, who has given most of his time during the past year to the furtherance of this stupendous enterprise. A little over a year ago there was formed in this city a Fourteenth



TOLTEC GORGE.

On line of Denver &amp; Rio Grande Railway



Street Viaduct Association, for the purpose of building a viaduct of earth and iron bridges, supported upon stone abutments, from the City Hall along the west bank of Cherry Creek, which, in one sense of the word, is really the extension of Fourteenth street, across all the railroad tracks, some fourteen in number, over the Platte river to the high ground on Platte street, making a continuous roadway. This embankment, with the approaches connected with it, is to be 3,200 feet long, and involves the lifting and placing in position of more than 170,000 yards of earth and other material, exclusive of stone and iron work. For several months the association had at work upon the embankment a number of teams, which, with scrapers and wagons, removed from the bed of Cherry Creek all of the material there available and placed it upon the embankment. As soon as the water was reached in excavating the bed of the creek it was apparent that ordinary means, such as scrapers, teams, etc., would not suffice for raising the earth, so, at a considerable expense, a steam dredge was purchased, which for several weeks did satisfactory work, raising several thousand cubic yards in proper position. When it was later discovered that a larger conveyer would have to be secured, efforts were made to purchase one; but in all these United States it was impossible to obtain one; therefore, the company made arrangements with the Colorado Iron Works to make one, which, when completed, was over 180 feet long, being made like the framework of a bridge of angle iron, solidly riveted together. Under the able management of Mr. C. D. Gurley, it is thought that the matter can be completed by July or August this year.

T. C. BRADFORD.

In connection with the promoters of the North Side, it is only just to mention T. C. Bradford, who is located at 127 to 131 Ashland avenue, opposite the North Side High school. Mr. Bradford is actively engaged in the real estate and loan business, and is regarded as one of the mainstays of the North Side. His business transactions have been uniformly satisfactory, and his care of property for non-residents is a marked feature of his business.

BERKELEY.

This beautiful addition to Denver is situated three miles from the business center of Denver. Platted about one year ago by a Kansas City syndicate, who purchased the property from John Brisbane Walker, through Carleton Ellis, the senior member of the firm of Ellis, McDonough & Co., and by them advertised to the world. Scarcely a person who has read of Denver within the past year but knows of this delightful suburb of Denver, the residence paradise of this fast growing city. It overlooks the city, with the grand Rocky Mountains on the other hand. Here are lakes, groves, streams and



every natural advantage to make Berkeley beautiful and desirable. It is connected with the city by rapid transit lines, motor and cable, which brings Berkeley very near to business, being a consideration for the busy man. Fifteen residences, costing from \$2,500 to \$6,000 each, are being erected in Berkeley, and about as many more costing from \$1,000 to \$2,000. Berkeley Lake is a beautiful sheet of water, surrounded by a delightful park. The lake is three times the size of Palmer Lake; is a very attractive feature, situated as it is in the center of this delightful suburb. A steam launch has recently been added to the equipment of the lake, and, with a fleet of sail and row-boats, make it one of the most attractive spots within a great many miles of Denver. The streets and avenues are broad, and lined with shade trees, at whose base a small trickling stream courses, which gives life to the trees and adds beauty to the scene.

Denver is much indebted to the proprietors of Berkeley for this excellent breathing spot. The success of the same is largely due to Ellis, McDonough & Co., who have been, and are now, sole agents for the property. They have published its beauties, its utility, etc., until even the children are singing the praises of Berkeley.

One of the most accomplished of American writers, upon a recent visit, remarked that Denver, west of Washington, was, for situation, surroundings and possibilities, the finest city he had ever seen. He said this standing on one of the Berkeley hills. "Don't you see" said this world-wide traveler, "the same old blunder, building down there, and trying to force everything eastward? Now look at those mountains, that sweep of country westward to the foot-hills, nothing ever to impede God's pure air as it comes over yonder snowy peaks, with its life-giving power to the homes that will soon cluster all around this lovely and favored spot. See those lakes; mark the city in full view, and the mountains above you. Do your work in this city? but this is the place to live. This will be the suburb of Denver—its 'West End,' its 'Hyde Park,' in the years to come."

The restrictions under which all sales are made will tend to materially enhance the value of the ground, and eventually make Berkeley the most desirable residence district about Denver. Strict prohibition of all intoxicants. Only residences can be built upon residence avenues, and must be at least 20 feet from street line. Barns and outhouses at least 100 feet from street line. No structure of an inferior order will be allowed, and no cottage or residence to cost less than \$1,000. Berkeley Lake forms the center of the Park (of 160 acres) and beautified by pebbled beach, trees, shrubbery, drives and walks around its entire border. A steam yacht and fleet of the daintiest rowboats ride the lake for the benefit of residents and visitors. Pure water, pure air, location 250 feet above the city, schools in easy distance, one of the finest colleges in the West situated in Berkeley.



CARLETON ELLIS.



JOHN McDONOUGH.

Firm of Ellis McDonough & Co., Real Estate and Investment Bankers.  
Sole Agents for Berkeley.

## ELLIS, M'DONOUGH & CO.,

REAL ESTATE AND INVESTMENT BANKERS, DENVER, COLORADO.

(MEMBERS OF DENVER REAL ESTATE EXCHANGE.)

CARLETON ELLIS.

**M**R. ELLIS was born in Pottsdam, N. Y., in 1858; was educated in the State University at Pottsdam; was a member of the class of 1880 at West Point, after which he lived six years in Florida, where he owns an orange grove; he came to Denver in 1884 and soon after embarked in the real estate business. In the spring of 1888 he formed a copartnership with John McDonough, under the firm name of Ellis, McDonough & Co. (Mr. Ellis had previously consummated the sale of Berkeley to a Kansas City syndicate, the largest single transaction ever made in Denver.) The above partnership was formed for the purpose of doing a general real estate business.

JOHN M'DONOUGH.

Mr. John McDonough is a native of England, coming to this country in 1870; he commenced life as a newsboy, and was afterwards connected with his father, the successful bookseller of Albany, N. Y., and 744 Broadway, N. Y. Subsequently for ten years he traveled for large business houses in Troy, N. Y., and New York City, going through the leading eastern cities. In January last Mr. McDonough decided to take Horace Greeley's advice and come West, which he did, to Kansas City, engaging in the loan business. He was induced by T. J. Green, the millionaire real estate dealer of that city, to come to Denver and form a partnership with Mr. Ellis for the purpose of handling the Berkeley property, owned by the Denver Land and Security Company, of which Mr. Green is president.



Ellis, McDonough & Co. are regarded as investment bankers, and are safe and reliable. While they are comparatively a new firm, they have risen rapidly in the business, and are considered among the most reliable of Denver's business men. Both Ellis and McDonough are sober and industrious young men, deserving the reputation they have earned.

#### TOWN OF BARNUM.

The town of Barnum is really an addition to Denver, although, like Highlands, it has a separate town government. That portion of Denver which lies north and west of the Platte river and south of Sloan's lake was at one time owned by the world-renowned P. T. Barnum, who several years ago gave the same to his daughter, Mrs. Helen M. Buchtel, wife of Dr. W. H. Buchtel.

The tract was divided, some of it being sold and platted under various names. Soon after Mrs. Buchtel platted the remaining portion into 6,000 or 7,000 lots. Without pushing the sale of these lots, nearly one-half have been disposed of, Mrs. Buchtel owning the balance, which are on the market for sale, at reasonable prices. Rapid transit to Barnum is being agitated with fair prospect of success. The required subsidy for cable extension to within a short distance of Barnum, it is said, is practically secured, and work will soon be commenced thereon. When the cable is constructed a horse car line will be run from Barnum to connect with it. The distance from the center of Denver to Barnum will not exceed three miles, and when rapid transit connections are made, Barnum will be within fifteen minutes' ride of Denver. Probably, of all divisions of North Denver, Barnum is the most sightly, nearer to the mountains, with surface just rolling enough to afford excellent irrigation and drainage.

Mrs. Buchtel is a thorough business woman, a perfect image of her father, P. T. Barnum, possessing many of his business characteristics. She subscribed \$7,000 to the fund for cable extension to the North Side, and is found ever with the foremost in promoting the general welfare of the city, while Dr. Buchtel, her husband, is one of the leading physicians of Denver, and, like his wife, contributes his share to the upbuilding of a great city.

Barnum is on the direct route to Fort Logan (three miles beyond), the new and handsome military post which is being constructed by the General Government, at an expenditure of nearly one-half million dollars. The grounds are being beautified, and, with the handsome buildings, fountains, etc., will make of this one of the most attractive spots around Denver, and eventually will have rapid transit connection with the city, in addition to the suburban train service of the Denver & Rio Grande and South Park railways.

## BLACK &amp; SANDERSON.

This partnership was formed in 1888, since which time they have transacted a real estate business, and have done much for the promotion of the North Side. Each individually had previously been working for the best interests of this delightful subdivision of Denver, and are entitled to figure in the history of this wonderful city. Charles F. Black was born near Frankfort, Clinton County, Indiana; removed to Remington, Jasper County, in his fourth year, and from there to Denver in 1879. First engaged in the boot and shoe business with his brother, U. L. Black, at 497 Larimer street. Graduated from the Denver High school in 1887; since then has engaged in the real estate business—first in the firm of Merriman & Black, at 1231 Fifteenth street, since then in the present firm of Black & Sanderson.



Residence of H. C. King, North Side

This is one of hundreds of residences on the North Side, some of which are superior in size, but none surpass it in completeness of arrangement, etc. Mr King is the senior member of the investment firm of King & McDowell, described elsewhere.



Returning to the city, we devote our attention to the composition of Denver in detail. The general situation of the city is beautiful. With the range of the Rocky Mountains towering in the west, and the illimitable plains stretching to the Missouri river on the east. Denver is worthy the attention and admiration of all who behold it. It is one of the greatest railroad points in the West, eighteen railroads centering here and radiating to all parts of the United States, thus giving unsurpassed facilities for trans-continental traffic. Denver is the capital of the state, and the county seat of Arapahoe County. The foothills of the Rocky Mountains are only fourteen miles distant, and Long's Peak, James' Peak, Gray's Peak and Pike's Peak are in plain view, connected by the gleaming, serrated line of the Snowy Range.

The Capitol building, now being erected, will cost about \$1,500,000, and will be the handsomest structure of the kind constructed for the money, in the United States. The stone, lime and cement is obtainable within a few miles of the city, from nature's store houses, at a minimum of cost and of transportation charges. Geddis and Series, the popular stone contractors of the state, have the stone work in charge; Mr. Gomery is superintendent for the state. His experience in contracting has specially fitted him for the position, he having constructed the court house at a cost of only a trifle over \$200,000, which building stands as a model of cheapness and beauty combined, and without a rival in the United States. It is so magnificent that strangers invariably mistake it for the State House.

The Court House grounds are beautifully kept, two handsome fountains constantly playing on the Tremont street front. Stone walks and stone coping add to the general attractiveness of the grounds. Here, too, are beautiful shade and ornamental trees. The famous artesian well, renowned for its curative properties, is also within this beautiful square. To view the present massive structure one would suppose it was large enough to accommodate the business of Arapahoe County for at least a century. Notwithstanding which, contracts have been let for the construction of a criminal court house and jail combined, which is to cost nearly \$600,000, and, if possible, will surpass the present court house, (which will be occupied by the county officers and various civil courts,) in beauty, etc. The grounds are to be twice or thrice the size of the present ones, situated just west of Cherry Creek, which divides East and West Denver. It is believed that when completed the grounds will be as much frequented as the present court house grounds, since its size will admit of more park features.

The United States Government is constructing a post-office and custom house, to cost \$1,000,000. Its magnificence may be imagined by computation and comparison. Just think of it—brick in the wall contracted at \$6 per 1,000; stone in the same proportion. Compared with Eastern structures, it will be seen that the cost of construction here is only about 50 per cent. of the cost East. The minimum cost



of construction of stone or brick buildings is attained in Denver owing to nature's lavish expenditure of energy necessary to upheave from the bowels of the earth everything that enters into the construction of Denver's handsome structures, (barring timber); Colorado lumber is used, but northern and southern pine is preferred. The cheap native material accounts for the great per cent. of magnificent stone and brick residences everywhere encountered in Denver; at least 99 per cent. of all buildings in Denver are of either brick or stone, and principally of both. A frame house is a rare sight, and is invariably a relic of the pioneer days of Denver. At least \$5,000,000 have been invested in brick and stone residences in Denver during the year just closed, and equally as much in business blocks.

#### CLIMATE.

Denver is the healthiest and pleasantest residence city in America; it has an elevation of 5,200 feet above sea level; at the foot of the grandest chain of mountains in the world; a pure, clear atmosphere, fresh and balmy, swept by the gentle zephyrs; the lofty peaks covered in summer by perpetual snow, and the air freighted with the healing balm gathered from the pine and spruce forests everywhere visible on the mountain sides. The fury of the west winds in winter is checked, broken, and dissipated by this same mountain range, and when the the furious winds have exhausted their force, they become zephyrs, warmed by the rays of a Colorado winter's sun, the intensity of which need to be experienced to be realized.

It has often been said that every day in Colorado is delightful, if the wind does not blow, and as the wind seldom blows, the proposition may stand almost without modification, that every day is delightful. Almost uninterrupted sunshine may be expected in June, and from August to Christmas. March is usually an early summer month, while April and May show characteristics of the spring season. The most glorious season of the year is usually ushered in by the September storm, which occurs about the first of the month, and is often followed by a light frost, which empties the hotels of their summer visitors, who suppose that the "horrors of winter" are about to settle over them. These horrors are, for the most part, imaginary, for, in the first place, it seems as though winter would never arrive. Month follows month—a slight snow now and then, quickly disappearing, hints of the austere season, but sunshine, warm and glowing is the rule, and slush and dampness is unknown. At last Christmas arrives, perhaps bringing with it a cold wave and a powdering of snow to render this festal season all the more enjoyable; then the glorious sun will again gain the mastery, and banish winter to less favored climes.

After a calm and sunny March, with some squally weather in April and May, spring approaches. Its advance is not accompanied with that feeling of lassitudiness and general derangement of the

nervous system so often experienced by delicate persons in the East, during the early days of spring. June is generally a heavenly month, dry, sunny and pleasant. It is "camping out" month; the fields are bright with flowers, and the hill-sides and thickets beautiful with blooming shrubs.

A winter's residence in Colorado will banish forever the false impression that this is a Boreal region given over to inclemency and snow drifts. There is more sunshine in Colorado than in Florida; there is less snow than in any state east of the Missouri River.

In the dry air of the Colorado plateau, the feeling of heat and cold is much less marked than in the humid atmosphere of Eastern states; 90 degrees is not oppressive, neither is almost any degree of cold distressing, there being no moisture; one does not experience that disagreeable feeling of chilliness that even moderate cold produces in the east. We rarely experience in summer 90 degrees Fahrenheit, and rarely does the thermometer fall below zero in winter. Either extreme does not stay with us but a few hours during a day or two, possibly, of an entire year. The nights in summer are invariably cool and pleasant. We herewith submit a table of

YEARLY AND SEASONAL AVERAGES.  
(Compiled from Fifteen Years' Observation).

SEASONS.	Average Temperature.	Average Maximum Temperature.	Average Minimum Temperature.	Average per cent. of Relative Humidity	Average Rainfall or Melted Snow in Inches.	Average Number of Days on which Rain or Snow Fell.	Average Number of Clear Days.	Average Number of Fair Days.	Average Number of Cloudy Days.	Average Number of Sunny Days.	Average (in tenths) Cloudiness.
Spring average....	47.2	77.9	19.2	49.1	5.86	25	33	39	20	81	3.0
Summer average..	69.8	95.9	47.1	44.9	4.91	26	37	42	13	89	2.4
Autumn average..	49.6	80.6	19.8	45.5	2.34	15	49	29	13	86	2.2
Winter average...	29.8	62.2	7.3	54.3	1.84	15	44	36	10	84	2.1
Yearly average....	49.1	79.2	19.7	48.4	14.95	81	163	146	56	340	2.6

JOSEPH J. GILLIGAN, Observer Signal Service, U. S. A.

A glance at this report, compiled by an officer of the United States Signal Service, shows the remarkable fact that 340 out of 365 were "sunny days" in Colorado, for the entire period of 15 years; during that period there were 10 successive months in which the sun was not clouded all of one day.

It is not necessary to add an elaborate argument. The conclusion is self evident and inevitable. The climate of Colorado, on the whole, presents advantages for the invalid and pleasure-seeker that cannot fail to command attention.

Professor F. H. Loud, of Colorado College, says of winter:

"The reports fail to make creditable the fact that for several hours on the majority of winter days, invalids can sit on porches without extra wraps; so powerful is the sun's heat in winter, that sunshades are grateful, and mid-day picnics are taken with enjoyment and benefit. It is at this season that the greatest improvement is noticed in consumptives."

#### CLIMATE AND HEALTH.

The following appeared in the Chamber of Commerce Reports for 1889, and was contributed by Samuel Fisk, A. M., M. D., President of the Colorado State Medical Society, Professor in the University of Denver, etc.:

"It gives the writer great pleasure to have assigned to him the subject of the present article for treatment, for a residence of now nearly nine years in this state, whither he originally came on account of impaired health, has convinced him that one of Colorado's chiefest resources is her climate, and that it is efficacious in the cure of a large class of pulmonary diseases that, under other conditions, must necessarily run to a fatal issue.

"While the consideration of the subject will have most markedly in mind the defining of those elements in our climate which are presumed to be beneficial in the arrest and cure of disease; it will also be a portrayal, to a certain extent, of the delightful qualities as well, those which prove so attractive to the tourist and pleasure seeker, and which have led so many of this latter class to linger on a while and then still longer, until finally they have established themselves here, and here made their abode.

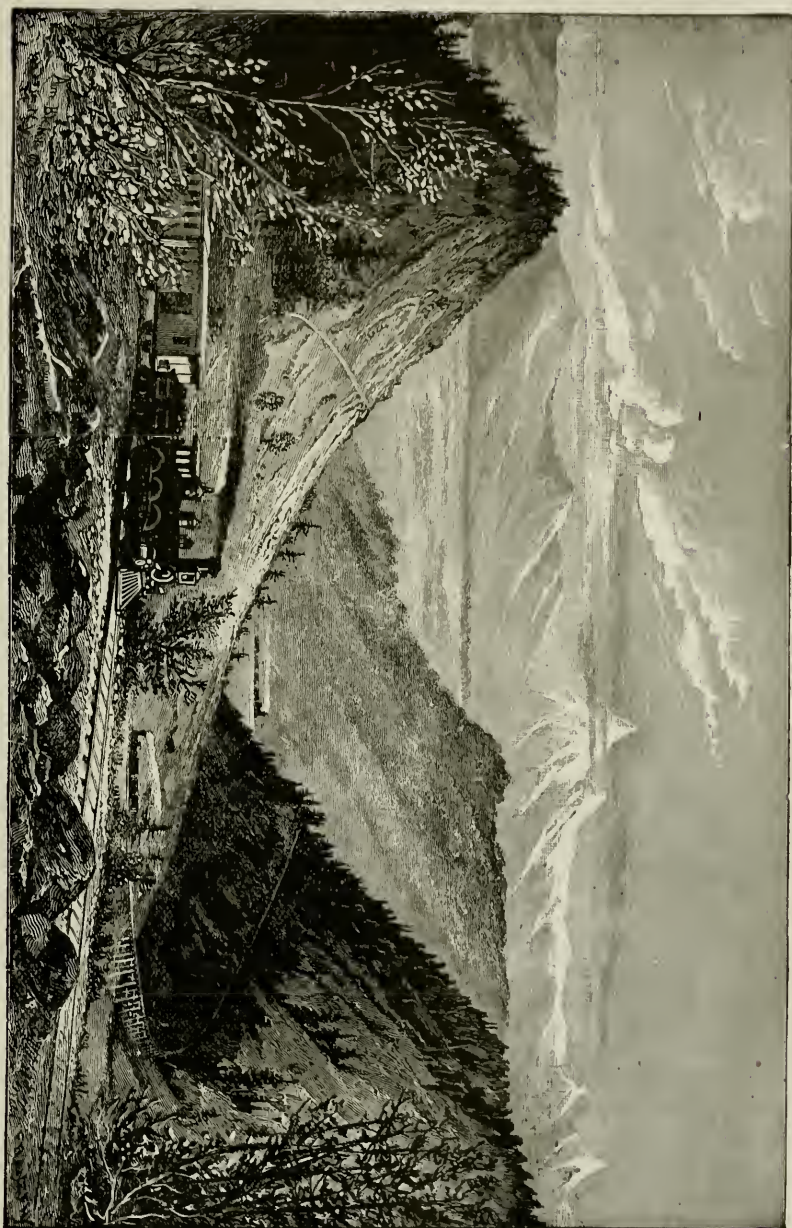
"One scarcely recognizes the prevalence and fatality of consumption until his attention is directly called to it.

Picking up, at hap-hazard, the Registration Report of Massachusetts for 1882, I find that one out of every six deaths, in that state, is caused by consumption; a percentage of 329 to the 100,000 of population; and that the city of Boston furnishes about one-quarter of all such deaths. If now we look to the country at large, we find that the same state of things exists. The census of 1880 shows that about 12 per cent. of all deaths the country over, are caused by consumption. In fact, the United States loses through this one disease as many lives annually as Spain lost through her recent epidemic of cholera.

"These facts are adduced simply to call attention to the prevalence and fatality of the disease. From it arises, naturally, the question—what can be done?

"When we look to medical lore on this point we find that the best recognized treatment for its prevention and cure is the climatic treatment; and that at the present time, the climates most highly endorsed are the high altitude ones, with a cool climate, of which class Colorado, in





Eastern Slope, Marshall Pass, on line of D. & R. G. Ry.

this country, and Davos, in the Old World, are the two chief exponents. In regard to these two resorts we further learn that the chief characteristics of their climate are elevation, sunshine and dryness. Let me devote a few minutes to showing to what extent these conditions exist in Colorado.

"The state covers an immense expanse of country and has an area of 103,925 square miles, more than double that of the State of New York and thirteen times that of Massachusetts. Within this area the inhabited portion of the state ranges from an elevation of 3,500 feet above sea level to 10,000 and 11,000 feet. There is then a wide range of elevation to be sought and applied. The places most frequented, however, range from 5,000 to 7,000 feet. But what effect does elevation have upon the human economy? Increase of elevation means decrease in atmospheric pressure, a diminution, in the case of Colorado, amounting to one-sixth of an atmosphere. That is to say, with an atmosphere pressing equally upon all objects, at 15 pounds to the square inch at sea level, in Colorado the pressure would only be  $12\frac{1}{2}$  pounds. The effect of this diminution in pressure on the human system is to induce a more rapid circulation and to increase the number and depth of respirations, both of which factors exert a salutary effect in many diseased conditions of the lung. It stimulates the lung to deeper and fuller inspirations, so that portions before unused, or but feebly used, are brought into play, and the whole lung becomes more largely expanded, leading to increased chest expansion. It also benefits the nutrition of the skin and of the internal organs, thereby improving the general nutrition.

"The chief effect of the sunshine is in permitting the invalid to live an out-of-door life. This influence cannot be overstated. It is the one factor in regard to the cure of pulmonary disease on whose importance all authorities are agreed. Of course, other factors, such as temperature, winds, rain and snow-fall, also exert their influence, in inducing to, or preventing, out-of-door life, but none have so potent an influence as the single one of sunshine. In its wake follow, to a considerable degree, these others.

"It is in this particular that the Colorado climate is particularly strong. Figures show that, according to the signal service method of reckoning cloudy days, there are only 46 such in a year in Denver, as against 87 in Jacksonville, 109 in New York, and 51 in Los Angeles. This, however, takes into consideration the whole twenty-four hours. If we approach the subject in another way, with reference to the ability of a patient to be out-of-doors during the daytime, we may take as a gauge what occurred in the winter of 1884-85, considering the months of September to April inclusive, in which time I find that there were only eleven days, out of 242, which were cloudy all day long—that is, when the sun did not shine at all from 5 a. m. to 9 p. m.

"Certainly, a counting of 320 days of clear or fair weather in a year, when the whole twenty-four hours is considered, or of 231 days out of 242 days, taking the hours from 5 a. m. to 9 p. m., is a tremendous showing of the extent of sunshine that occurs in Colorado.

"But this is not all. The principal resorts lying, as they do, on the edge of the plains, and not being sheltered by mountains, enjoy a number of hours of sunshine a day such as few mountain resorts can boast. A comparison with European resorts will make this clearer. Dr. Tucker Wise has stated that on the 1st day of January the number of hours between sunrise and sunset in the Alpine resorts is as follows:

	Hours.	Minutes.
Maloja .....	7	10
Wiesen .....	6	10
Pontresina.....	6	40
St. Moritz.....	5	5
Davos Platz.....	4	57
Andermatt .....	3	30

"By way of comparison I introduce Denver, nine hours and seven minutes, or nearly twice that of the world-renowned Davos.

"Not only does Denver enjoy so many hours of sunshine, but there is the additional consideration that the sun is up, warming the air, a number of hours before the invalid gets out-of-doors, while at Davos and other Alpine resorts the sun and the invalid make their appearance together. The following figures of sunrise will show this: Maloja, 9.25 a. m.; Wiesen, 10.35; Pontresina, 8.30; St. Moritz, 10; Davos Platz, 10.03; Andermatt, 11.45; Denver, 7.30, for the 1st day of January.

"Knowing the warm influence of solar radiation, the part that these early hours of sunshine play in making the air comfortable for the invalid cannot be overestimated. It is like having a fire built in a cold room an hour or two before a patient arises, or having it lighted just as he tumbles out of bed.

One more influence of sunshine, and I will then proceed to other topics. The mental influence, the cheer which bright sunshine, clear, warm air, and a dry soil give to life out-of-doors, thereby inviting and not forcing the invalid to a drive, a walk, a ride, a game of tennis, and to all healthful out-of-door influences. I cannot lay too much stress upon this factor of Colorado sunshine—an important, if not the most important, feature of our climate. I would like to touch on it from the more poetic side, telling of the color it gives to daily life, but I must hasten to other considerations.

"As generally spoken of, humidity has reference to atmospheric moisture. For the sake of convenience, I wish also to include under this head the soil moisture, as well. The researches of Dr. Bowditch, in this country, and of Dr. Buchanan, in the old, attest the necessity



of a dry soil when looking for a health resort for the consumptive. Herein Colorado fills the bill to a nicety. The soil is porous and sandy and quickly absorbs any moisture that may fall upon it. Moreover, it is admirably drained, for from the backbone of the Rocky Mountains there is a steady, even fall towards the east to the Missouri River, some 500 miles distant.

"This river is the nearest body of water of any size, the Gulf of Mexico being 900 miles away. This great interval between the mountains and any large body of water, and the very dry, porous soil, are the two factors of importance in speaking of the relative and absolute dryness of Colorado. The one prevents there being much moisture in the air, the other drinks up the moisture and carries it off rapidly, whenever any falls. But now let us state some facts:

"The average mean relative humidity, at Denver, for a series of years I have calculated to be only 45.8 per cent. of saturation, as against 69 per cent. in Jacksonville, Florida; 70.2 per cent. in New York, and 65.8 per cent. in Los Angeles, California. I have also shown in a previous writing that this mean is reduced to an average mean of 41.5 per cent. at noonday for the eight winter months of September to April inclusive, and that it not infrequently sinks to 25 per cent. of saturation. If, instead of relative humidity—*i. e.*, the number of grains of vapor contained in a cubic foot of air—the showing is immensely in favor of Colorado, inasmuch as rare air at a given temperature will hold less moisture than a denser air at the same temperature. The mean absolute humidity for Denver for a series of years was only 1.81 grains of vapor, as against 5.38 grains at Jacksonville, 3.02 at New York, and 3.77 at Los Angeles.

"All authors attest the value of dry air in the arrest or cure of pulmonary disease, and the influence of moisture in its production. A patient in search of a dry air cannot do better anywhere in the United States than to come to Colorado.

"When it comes to a consideration of the rain and snow-fall in Colorado, a very few facts will suffice. The average of rain and snow (melted) is 14.77 inches, as against 55.94 inches in Jacksonville, 49.47 in Boston, 42.7 in New York, and 18.97 in Los Angeles. Of these 14.77 inches, the greater part falls in the spring and summer months.

"In winter the ground is nearly free from snow, for when snow does fall it is quickly licked up by the dry breezes or drunk up by the porous soil. This dryness of the soil conduces to an out-of-door life by inviting to driving, riding, walking, climbing, tennis, polo and all sorts of sports. Moreover, the absence of snow and soil moisture does away with wet feet, so frequent a cause of colds, an aggravation to consumption. Fogs are almost unknown.

"The question of the temperature of the Colorado climate is one of the most difficult to treat, because it involves the consideration of



FREMONT PASS.—Altitude 11,500 Feet.  
On line of Denver and Rio Grande Railway.

the difference between day and night, between the sun and the shade, between mountain and plain, between month and month. Broadly speaking, the days of the summer months are uncomfortably hot in the cities, but even then the nights are cool, requiring that one be covered with a blanket, so as to be comfortable.

"There is no denying the fact that Denver, and even Colorado Springs, were intolerably hot this past summer. Even admitting this, the advocates of this climate can respond that the invalid should go to the mountains, where in Estes Park, Manitou Park, Georgetown, Poncha Springs, Twin Lakes, and other places he can breathe the purest air and have comfort. But the main consideration is one of the winter months, say from September to April inclusive. Here, again, I must admit many of the adverse criticisms made in regard to our climate. One writer, hunting the records over for years, accuses us of having a diurnal change of 80 degrees in twenty-four hours, and he was correct, such a variance does occur—occasionally.

"The meteorological conditions producing this change involve such well known principles, that it scarcely seems worth while to discuss them. Land radiates heat more rapidly than water; it becomes heated and loses its heat much sooner than water, and a dry, sandy soil will do this more rapidly than a moist. Shade and vegetation hinder both processes, so that the absence of shade favors both the heating and cooling process. A rare, dry air favors the transmission of solar heat, by robbing it of but little of its intensity, and it also aids and abets terrestrial radiation.

"These, then, are the conditions existing in Colorado; a dry, sandy soil, a lack of shade and vegetation, a rare, dry air. The result is a rapid warming up under the influence of the sun; a rapid cooling when that influence is removed. Hence we do have warm temperatures by day and cool temperatures by night, and the difference does, at rare times, amount to 80 degrees. But, for the purposes of an invalid, the warmth, and not the cold, should be considered, because the latter comes at night, when the invalid should be housed and can regulate the temperature, while the former is at mid-day, when he is getting his exercise out-of-doors. A temperature of 62 degrees at noon is of more importance to him than one of minus 18 degrees at midnight. But Colorado climate is, in winter, a cool climate. Monthly mean for

January, 1886, at 1 p. m., was.....	27.3 deg.
February, " " " " .....	48.0 "
March, " " " " .....	41.1 "
April, " " " " .....	52.3 "
May, " " " " .....	74.3 "
June, " " " " .....	75.1 "
July, " " " " .....	85.2 "
August, " " " " .....	81.5 "
September, " " " " .....	72.0 "
October, " " " " .....	64.2 "
November, " " " " .....	41.3 "
December, " " " " .....	45.5 "

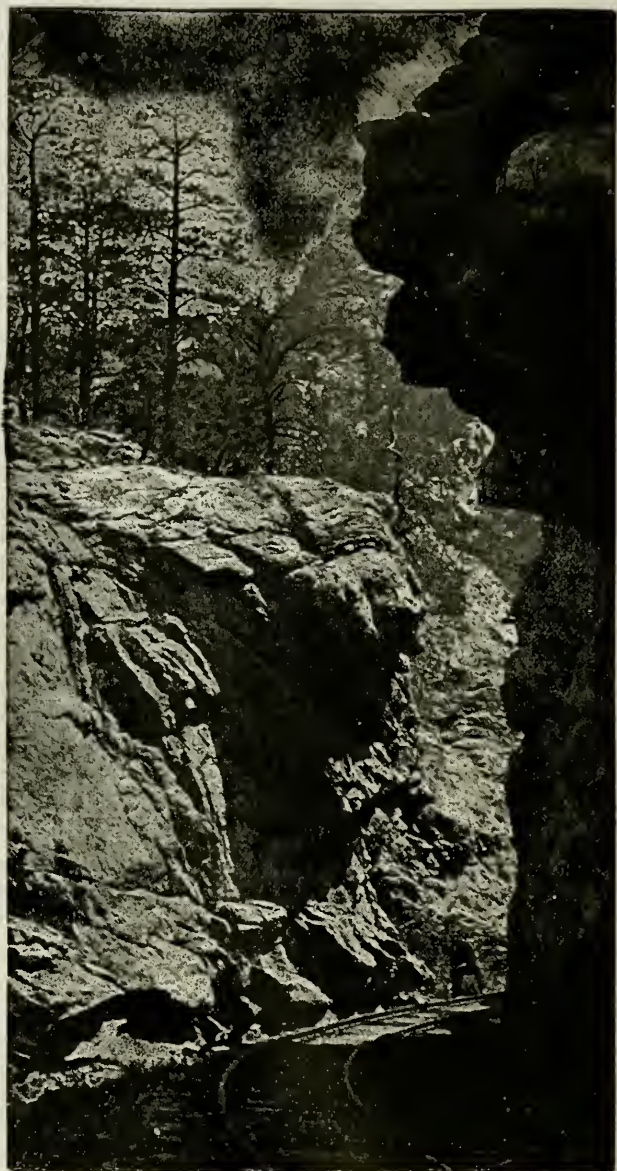


"This is the temperature of the air at the time when an invalid is most likely to be out of doors. If these means seem too cold to the student of climate, I can only urge in extenuation: (1) To quote from Dr. Hermann Weber: 'It is only a remnant of our old prejudice which can make us afraid of dry, calm, moderate cold;' or (2) as pointed out by Dr. Frankland, and as every person who has had experience knows, that 'the air, if still, feels warmer at an elevated station than in the lower and denser regions of the atmosphere;' and (3) that the solar radiation must be taken into consideration, which transforms to one in the sunshine the air temperature from one of 27.3 deg. F. at noon in January to 92.5 deg., or the air temperature of 45.5 deg. in December to the heat in the sun's rays of 100.2 deg.

"No one, I think, need be apprehensive of cold days in Colorado unless he be so much impoverished in physical condition as to make him an unfit subject for our climate. In most cases the inhalation of cold, dry air stimulates the respiratory functions to greater activity, leading, as Dr. Weber asserts, to greater expansion of the lungs and thorax, to improvement of the appetite and nutrition, thus exercising a beneficial influence on the course of phthisis.

"Statistics show that the average daily movement of the air in Denver is 145 miles, as against 238 in Boston, 207 in New York, and 159 in Jacksonville; the data further prove that at 9 a. m. the average hourly velocity is 6.7 miles during the eight months, September to April inclusive, 8 miles at 1 p. m., and 8.6 miles at 5 p. m. Despite this low average, we are constantly accused of having high winds, and of the dust and sand storms being so disagreeable as to be detrimental to an invalid. With a view of meeting this criticism I collected data awhile ago, which showed that in the year 1886 there were only twenty-three days in which there occurred a wind of eighteen miles or over, at two consecutive observations of the three 9 a. m. and 1 and 5 p. m., and that there were about an equal number of times when there was a wind of equal velocity at only one of these three observations. Now, a wind of eighteen miles velocity is not a high wind. It is less than double the average velocity of the air in Boston, and is not more than a stiff breeze.

"We do have occasionally high winds, and they occur more frequently in some places than in others, but we are not entitled to the reproach so frequently hurled at us, that the winds and dust storms spoil the climate. The truth is, that owing to the sandy character of the soil, and the absence of snow covering, a wind of moderate velocity will lick up the dust and set it a flying, while a stronger wind, as of eighteen miles per hour, will set up what is called a dust storm. These are no more disagreeable than I have witnessed on Commonwealth Avenue, in Boston, many and many a time. From the nature of things they are more frequent in the narrow streets of Denver than in the open country, or in the health resorts, and are in no way to be ranked



Mother Grundy, Clear Creek Canon, Colo  
On line of Union Pacific Railway.

with the cyclones of Kansas, or even with the gentle and moderate breezes of the peaceful Connecticut Valley, which I have known to blow over bridges and tear up hundreds of elm trees by the roots.

"These dust storms are disagreeable, principally so in Denver, where the streets are the natural soil, which becomes dried by the ardent rays of the sun, and pulverized by travel, so that they have to be constantly watered, even in January and February. But the frequency and the violence of these storms have been very much overstated, and they do not seriously impair the invalid's comfort, or keep him indoors much of the time.

"These, then, are the general characteristics of the Colorado climate: 1, elevation; 2, dry air; 3, a large amount of sunshine; 4, a warm sun temperature; 5, a somewhat variable temperature, cool, not cold in winter—cold during a winter's night, but comfortable at midday; 6, a moderate motion of the air, with occasional high winds; 7, a small snow and rain fall; 8, the absence of fogs; 9, a pure air; 10, a dry sandy, well drained soil.

"But the simple narration of these climatic conditions in no way rounds out a just description of the arrest of consumption as applied in the Colorado climate. It does not tell of the local conditions of the different resorts; of the out-of-door life; of the diet and exercise; of the home life; of ranch life; in fact, of the various local conditions and of the means adopted to aid recovery, many of them varying from those employed elsewhere.

"A description of this side of the subject furnishes too large a field to be handled by me at the present time, and in their individual application to the various cases of consumption they should be left entirely in the hands of competent physicians residing in that climate. One feature cannot be too strongly emphasized as characteristic of the Colorado cure. It is an all-year-round resort, and not simply a winter resort; and, further, our state is an active, growing community, and there is plenty of room for the energies of the most active, when once a recovery is secured, so that a return to old methods and haunts is not to be recommended.

"The state now claims a population of over 350,000 inhabitants. How many of these have come for reasons of health it would be difficult to say. Every town and every city has its large percentage of such people who, in their persons and in the energy of their lives, are the strongest testimony that can be given to the efficacy of the Colorado climate in the arrest and cure of pulmonary disease.

"It will be well to indicate briefly some of the pulmonary and other diseased conditions that are allayed, benefitted or cured by a residence in this high altitude.

"In phthisis the greatest benefit is derived in incipient cases, or in those who seek a climate as a preventive. The so-called fibroid phthisis is also especially benefitted by high altitudes. Cases of lung



trouble originating in bronchitis, pneumonia or pleurisy, derive especial benefit in high altitudes. Hæmorrhagic cases do remarkably well, and but little danger is to be apprehended from altitude *per se* as tending to produce a recurrence of hæmorrhage in such conditions.

"It is not advisable to send patients here in whom the phthisical affection is very acute, who have high fevers, hectic, profuse sweats, who are nervous and irritable, whose powers of reaction are seriously impaired, and whose indigestion is imperfect. The question of reaction and digestion are two of the most important considerations. When there is a tendency to repair, the digestion is good, the patient bears cold well, and there is not an erethic temperament, I have seen patients do admirably well in this climate, even in advanced stages of disease, and where considerable lung tissue was involved. On the other hand, I have seen others with but comparatively slight consolidations, but who were nervous, who reacted badly to cold, whose digestive powers were seriously enfeebled, run down rapidly under the same conditions.

If kidney disease complicates the phthisical tendency, the patient should not be sent here. Nor should cases with valvular heart disease complicating phthisis seek this altitude, unless there be sufficient hypertrophy of the heart muscles to compensate for the valvular insufficiency.

The so-called laryngeal phthisis is injured rather than benefitted by high altitude climates.

Asthmatics find relief in this climate, a relief which in most cases is instantaneous, but they are liable to lapse again into their old condition by a return to old haunts.

Chronic bronchitis and most catarrhal troubles are benefitted, though in the cities, where the streets are not paved, the dust is frequently found to be very irritating.

It is not advisable for persons having valvular lesions of the heart uncomplicated by any phthisical condition to come here. Such cases do better at sea level.

"Cases of kidney affections probably do better in a warmer, moister climate.

"This invigorating climate is admirably adapted to most persons who are anæmic or debilitated from over-work, malaria, dyspepsia or what not.

"Some so-called nervous cases improve, others are rendered worse by altitude.

"One fact should be impressed upon the reader, viz: This climate should not be sought as a last resort by consumptives.

"Denver has become such a busy, active city, that it is no longer as good a resort as formerly. It serves better as an objective point from which the invalid can launch out into other portions of Colorado, and

this selection of the proper place in each individual case, should always be under the advice of a competent physician on the spot.

"As a place of residence after recovery has occurred, it can be highly recommended. It is also a desirable place of residence for those who necessarily have to combine business with a consideration of health. For those who are not diseased, but are seeking a home in a land of sunshine, it cannot be surpassed. Its drainage is good, the water supply clear and healthful, and the air bracing. At present Denver is undergoing rapid transformations, and there are many improvements to be suggested, but, in the main she is a clean, healthful, attractive city, offering unusual advantages to those seeking a place of residence.

"One word should be said in conclusion with reference to the ease with which one can travel here. Three days aboard the cars will land one in Denver after leaving the extreme East; and my experience, from frequent journeyings back and forth, leads me to believe that one can travel more comfortably west of Chicago than he can east. Fast vestibuled trains, with buffet cars, run in to Denver on many of the roads, and the service is admirable."

Bayard Taylor, one of the most classic minds America has ever produced, while on a visit to Denver some years ago, wrote as follows:

"Ever since my arrival, I have been studying the mountains. Their beauty and grandeur grow upon me every hour of my stay. None of the illustrations accompanying the reports of exploration, and other government documents, give any distinct idea of the variety of harmony of forms. Nowhere distorted or grotesque in outline, never monotonous, lovely in color and atmospheric effect—I may recall some mountain chains which equal, but none surpass them. From this point there appears to be three tolerably distinct ranges. The first rises from 2,000 to 3,000 feet above the level of the plains, is cloven assunder by the canons of the streams, streaked with dark lines of pine, which feather its summits, and with sunny steep slopes of pasture. Some distance behind it appears a second range, of nearly double the height, more irregular in its masses, and of a dark, velvety, violet hue. Beyond, leaning against the sky, are the snowy peaks, nearly all of which are from 13,000 to 15,000 feet above the sea. These three chains, with their varying but never discordant undulations, are as inspiring to the imagination as they are enchanting to the eye. They hint of concealed grandeurs in all the glens and parks among them, and yet hold you back with a doubt whether they can be more beautiful near at hand than when beheld at this distance.

Denver is so beautiful and the climate so delightful, that even the blind may see and appreciate. In evidence we introduce the following, written for the "Denver Republican" by a blind man:

## DENVER.

By R. D. SCOTT (the blind musician of the Scott Family Concert Company).

Away in the West sits the queen of our nation,  
 Where the Platte and the Cherry unite in their flow,  
 Where sunlight is brightest in all the creation,  
 Where moonbeams most witchingly dance in their glow;  
 Where broad prairies gleam with the hues of the rainbow,  
 Rich tributes from Flora not grudgingly given,  
 O'er mountain, through canon, with light step I'd fain go,  
 Where zephyrs ethereal seem wafted from heaven;  
 Where the frontiersman's shot, or shaft of the red man,  
 But recently startled the antelope fleet,  
 Where the pioneer's hut or bones of the dead man  
 Were the rare human signs which the eye would meet.  
 Fair Denver! thy past though we will view with wonder,  
 The wealth of thy present though bards loudly sing,  
 'Tis thy wondrous future that tongue and pen thunder,  
 Till echoes from Maine to Oregon ring.  
 Where summer and winter with mildness are fraught,  
 The grandeur of snow-clads forever in view;  
 Where fabulous wealth from the Rockies is brought  
 And health-laden breezes the invalid woo.  
 Then fill me a bumper—let's drink to the glory  
 Of Denver, the peerless, proud Queen of the Plain!  
 May learning and morals tint brightly the story  
 On history's page of her prosperous reign.

## RAILROADS.

Denver has 18 railroads: Chicago, Kansas & Nebraska, (Rock Island system) to Kansas City, St. Joseph and Chicago.

Union Pacific—or Omaha Short Line.

Kansas Pacific—direct to Kansas City.

Burlington & Missouri River—Lincoln, Omaha, Kansas City.

Atchison, Topeka & Santa Fe—Denver to Pueblo and Kansas City east and west through New Mexico and Arizona to the Pacific, via Southern California.

Missouri Pacific—Pueblo, Kansas City, Memphis and New Orleans.

Denver, Texas & Fort Worth—short line to the sea. Northern and Central Texas, to New Orleans and Galveston.

The Denver & Rio Grande—comprising the greatest narrow gauge system in the world, with more than 1,500 miles of operated roads within the State of Colorado, extending from Denver to the Utah





The Bow-Knot Loop, near Georgetown, on line of Union Pacific Railway.

line, and there connecting with the Utah Western for Salt Lake and the Pacific. Its multifarious branches reach nearly every point in Southern and Southwestern Colorado; also the mines of Leadville, Gunnison, Eagle River, Aspen, Ouray, Silverton and Durango. It runs over the border to Espanola, New Mexico, where it has connection with Santa Fe. Arrangements are now being made for the conversion of its main line into a standard gauge, by the addition of a third rail, to be equipped with the finest rolling stock in the West.

The Denver & Rio Grande—standard gauge, Denver to Palmer Lake, Colorado Springs, Manitou, Pueblo, Trinidad and almost completed to Leadville.

The Colorado Midland—standard gauge; Denver to Colorado Springs over the track of the A., T. & S. F., thence by its own line to Manitou Springs, Leadville, Aspen and Glenwood Springs.

The Denver and South Park—narrow gauge; to Leadville and Gunnison.

The Denver & Boulder Valley—standard gauge; to the Erie coal mines, and thence to Boulder.

The Denver, Utah & Pacific—narrow gauge; to Longmont and Lyons.

The Colorado Central—standard gauge; Denver & Golden, and thence along the base of the mountains to Boulder, Longmont and Fort Collins, to a connection with Hazard on the Union Pacific west of Cheyenne.

The Colorado Central—narrow gauge; Denver to the gold mines of Gilpin County, to Idaho Springs and the silver mines above Georgetown.

The Denver & Scranton—narrow gauge coal road.

The Denver Circle or Belt Line—controlled by the Atchison, Topeka & Santa Fe.

Seventy-one passenger trains arrive and depart daily.

The eighteen railroads above mentioned have mileage, which is directly tributary to Denver, as follows:

	In Colorado.	Total Miles.
Denver & Rio Grande .....	1,478.84	1,570.54
Union Pacific and branches.....	884.30	5,825.60
Kansas Pacific (U. P). ....	192.30	192.30
Denver, Texas & Fort Worth.....	240	803.50
Burlington & Missouri River.....	350	4,693.38
Denver, Utah & Pacific. ....	44	44
Colorado Midland .....	428	428
Atchison, Topeka & Santa Fe, and Branches ....	390	7,374.01
Missouri Pacific.....	120	6,974.00
Chicago, Rock Island & Pacific.....	120	3,000.00
Denver & Rio Grande Western .....	40	373
Total.....	4,287.44	31,278.33

A total of 31,278.33 miles owned or controlled by the railway companies that make Denver a terminal station. The traffic of Denver is something enormous. We quote from the late report of the Chamber of Commerce, the receipts by months in 1888 straight car lots reported by the Colorado Railway Association:

January, Straight Cars.....	8,498
February, " " .....	8,825
March, " " .....	8,198
April, " " .....	9,295
May, " " .....	9,472
June, " " .....	8,540
July, " " .....	8,681
August, " " .....	9,671
September, " " .....	11,137
October, " " .....	11,682
November, " " .....	10,881
December, " " .....	12,850
Total.....	117,730

Add Denver, Texas & Fort Worth and Denver, Utah & Pacific Railway receipts—the former 5,590, the latter 8,608 cars, neither of which roads were members of the Colorado Railway Association until August, 1888, when the Fort Worth joined the association. We then have a total of straight cars received of 131,928. It is found that mixed freight receipts equal 15 per cent. of the straight cars, which amount to 19,788 cars, or a grand total, exclusive of express receipts of cars and freights received during 1888, of 151,716 cars, an increase of 29,704 over one year ago.

The express receipts for 1888 were as follows:

1888. Month.	Eggs. Cases.	Butter. Pounds.	Dressed Poultry, Pounds.	Live P'ltry. Coops.	Game Pounds.	Berries, Quarts.	Fruits, Pounds.
January .....	1,330	47,636	163,090	.....	780		
February.....	3,275	49,149	124,007	30	185		
March.....	3,678	68,681	143,519	74	1,600	480	605
April.....	4,527	84,503	101,830	98	1,240	3,912	2,760
May.....	1,526	32,994	72,392	335	2,052	52,708	95,680
June.....	1,174	84,308	61,349	466	.....	52,824	224,720
July.....	1,280	55,741	32,800	570	.....	3,576	14,580
August.....	1,500	45,716	36,336	615	61	.....	6,520
September ...	1,942	49,892	41,132	548	200	.....	2,460
October .....	2,142	60,172	90,376	328	6,950		
November ....	1,331	48,695	356,082	191	9,625		
December ....	1,974	68,635	377,310	42	20,895		
Total, 1888..	25,679	796,122	1,598,162	3,297	43,588	113,590	347,775
By Freight...	24,005	160,000	150,000	.....	20,000	.....	20,000,000
Grand Total	49,679	956,122	1,748,000	3,297	63,588	113,590	20,347,775



## COMMENTS.

The figures of this statement scarcely need elaborate analysis or comment. Nothing could be more indicative of gross negligence of great opportunities. To say that we cannot produce the 770,370 dozens of eggs represented in the 25,679 cases received here by express and by freight, forty-five car-loads, 720,000 dozen were chiefly from other states, is preposterous. The only explanation that can be given is that we haven't grown up to it; our farmers are not yet familiar with the demands of the market; but they are gradually becoming enlightened on the subject by just such publications as these. Again, look at the figures for butter. Seven hundred and ninety-six thousand one hundred and twenty-two pounds! By freight ten car-loads, averaging, say, 16,000 pounds per car, or 160,000 pounds, were received. Besides, 385,517 pounds of oleomargarine were manufactured in Denver last year to splice out the demand. Thus we have no less than 1,341,639 pounds of butter and its representative as the Denver market for that product. But we cannot stop here; there is the item of dressed poultry to which we desire to call your attention—1,598,162 pounds, and of live poultry, chickens principally, 3,297 coops brought in, and nine ear-loads of dressed and live poultry by freight, the greater proportion from Kansas, Nebraska and Iowa, the fruits of other people's industry and foresight, and, in like ratio, of the blindness of others to their own interests. There was received 1,000 cars of fruit and berries by freight, principally from other states, weight about 20,000 pounds per car—20,000,000 pounds—making a total of 24,884,457 pounds of produce shipped into Denver that should be raised in Colorado.

Add to the above 106 car-loads of dressed beef, 65 cars of lard, pigs' feet, 3 cars; bacon, 65 cars, and pickled pork, 2 cars, which makes a grand aggregate of 31,909,457 pounds of foreign product, that would represent as much to farmers of Colorado if properly pursued as the entire present value of crops raised in the state, while the per cent of profit would be much larger. The state is admirably adapted to small farms and rich returns from a home market. The growth of Denver as a stock market is very interesting, and we submit the following comparative table for two years:

RECEIPTS. RAILROADS. 1887.	Cars.	Cattle.	Cars.	Hogs.	Cars.	Sheep.	Cars.	Horses.	Cars.	Decrease Cars.	Increase. Cars.
Union Pacific . . . .	591	14,681	151	11,423	136	17,248	217	3,951	1,095	....	89
Burlington & Mis- souri River . . . .	212	4,989	537	41,750	43	4,841	18	242	810	....	613
Denvr & Rio Grnde	373	6,014	0	.....	63	5,231	8	134	444	753	....
Denvr, Texs & Gulf	75	1,638	0	57	15	1,859	0	....	90	7	....
Denvr, Utah & Pefic	2	24	1	.....	1	79	0	....	4	....	2
A., T. & S. Fe. ....	31	687	0	.....	0	.....	0	....	31	....	....
Driven in . . . . .	....	10,379	....	348	..	7,621	..	933	....	....	....
Total . . . . .	1,284	38,412	689	53,578	258	36,879	243	5,260	2,474	760	704
1883.											
Union Pacific . . . .	594	13,937	176	14,270	249	35,621	215	3,909	1,234	....	139
Burlington & Mis- souri River . . . .	99	2,258	620	48,499	48	6,419	36	470	803	7	....
Denvr & Rio Grnde	1,360	20,581	2	136	352	44,250	31	409	1,745	....	1301
Denvr, Texs & Gulf	1,083	39,185	....	....	42	5,405	31	687	1,156	....	1006
Denvr, Utah & Pefic	6	110	....	....	....	....	....	....	6	....	2
A., T. & S. Fe. ....	559	15,848	3	290	5	546	9	167	576	....	545
Driven in . . . . .	....	13,876	....	612	....	16,341	....	1,483	....	....	....
Total . . . . .	3,701	105,792	801	63,807	696	108,582	322	7,125	5,520	7	3046
SHIPMENTS. RAILROADS. 1887.	Cars.	Cattle.	Cars.	Hogs.	Cars.	Sheep.	Cars.	Horses.	Cars.	Decrease Cars.	Increase. Cars.
Union Pacific . . . .	233	4,536	34	1,656	73	7,924	123	2,143	463	659	....
Burlington & Mis- souri River . . . .	100	2,216	0	....	7	822	8	139	115	97	....
Denvr & Rio Grnde	264	5,832	134	7,776	9	603	54	677	461	....	324
Denvr, Texs & Gulf	12	355	7	503	6	690	3	52	28	....	2
Denvr, Utah & Pefic	4	48	2	95	0	....	0	....	6	12	....
A., T. & S. Fe. ....	1	25	0	....	0	....	2	45	3	....	3
Smith Bros . . . . .	....	....	....	29,788	..	....	....	....	....	....	....
Denver Pack'g Co..	....	....	....	....	..	....	....	....	....	....	....
Burkhardt . . . . .	....	5,696	....	11,843	..	1,194	....	....	....	....	....
Driven out . . . . .	....	19,576	....	1,976	..	25,646	..	2,202	....	....	....
Total . . . . .	614	38,284	177	53,637	95	36,879	190	5,258	1,076	758	329
1888.											
Union Pacific . . . .	1,760	53,896	13	670	269	35,948	179	3,390	2,221	....	1758
Burlington & Mis- souri River . . . .	739	16,995	....	....	104	10,765	22	463	865	....	750
Denvr & Rio Grnde	41	675	96	5,308	20	2,220	27	299	184	277	....
Denvr, Texs & Gulf	8	140	2	145	6	665	5	107	21	7	....
Denvr, Utah & Pefic	....	....	....	....	....	....	....	....	....	6	....
A., T. & S. Fe. ....	45	1,250	1	70	5	671	17	277	68	....	65
Burkhardt Pkg. Co.	....	8,703	....	24,949	....	11,536	....	....	....	....	....
Smith Bros. . . . .	....	....	....	31,035	....	....	....	....	....	....	....
Driven out . . . . .	....	24,252	....	1,630	....	46,380	....	2,579	....	....	....
Total . . . . .	2,593	105,893	112	63,807	404	108,194	250	7,119	3,359	290	2283

Six lines of railway connect Denver, Colorado Springs and Pueblo with the Atlantic coast, three with the Pacific, and one furnishes a short and direct line to tide water at Galveston and New Orleans. Three lines connect the same cities with the developed coal fields of Boulder, El Paso, Fremont and Las Animas counties; and every precious mining district in the state, with three exceptions, has daily communication with the capital by means of substantially built and admirably equipped lines of railway. Nine years ago the population of the state was less than 200,000; now it approximates half a million. Then the united population of Denver, Colorado Springs and Pueblo, Trinidad and Canon City would have fallen short of 50,000. Now the number of persons in those cities is but little less than the total number of inhabitants of the entire state in 1880, Denver alone having 125,000 within its corporate limits. In December, 1884, the National Banks of Denver contained deposits amounting to \$7,220,740; in December, 1888, they amounted to \$13,585,926; the total deposits by days for the year ended being \$260,000,000, a net gain in four years of 88 per cent. More than 15,000 wage earners are employed in the manufacturing and business establishments of this city, and their yearly wages exceed \$20,000,000.

## MANUFACTORIES.

Kind	No.	Capital Invested.	Business in 1888
Extracts.....	5	\$ 15,000	\$ 150,000
Carriages.....	11	525,000	1,500,000
Vinegar and Pickles .....	8	125,000	400,000
Brooms and Brushes .....	3	75,000	125,000
Blank Books and Printing ....	29	500,000	1,150,000
Stone Works.....	9	80,000	450,000
Smelters and Samples .....	13	4,000,000	16,000,000
Cigar Manufactures .....	28	275,000	4,500,000
Crackers .....	3	250,000	350,000
Bread.....	55	200,000	200,000
Mining Mach'y, tools, etc.....	40	1,500,000	2,500,000
Lumber and Planing Mills....	12	2,050,000	3,100,000
Brewing and Bottling.....	10	600,000	1,800,000
Confectionery .....	12	90,000	300,000
Manufacturer's Agents .....	11	25,000	110,000
Soap.....	3	175,000	250,000
Mattress.....	2	100,000	250,000
Flour Mills .....	9	1,000,000	3,200,000
Cigar Boxes .....	5	10,000	50,000
Brick .....	18	200,000	750,000
Canned Goods .....	4	90,000	100,000
Cement and Lime Manufactr. 3		125,000	200,000
Glass Works .....	1	75,000	100,000
Iron and Wire Fence.....	2	15,000	25,000
Jewelry Manufactures .....	5	100,000	150,000
Macaroni.....	1	1,000	6,000
Novelty Manufactures .....	7	40,000	100,000
Tin Sheet Iron, Copper.....	15	100,000	300,000
Potteryware .....	1	10,000	15,000
Show Cases.....	2	40,000	50,000
Tents, Awnings, etc.....	2	50,000	100,000



Kind	No.	Capital Invested.	Business in 1888
Trunks and Valises.....	3	50,000	120,000
Tailoring .....	75	200,000	250,000
Foundrys.....	10	100,000	250,000
Miscellaneous .....	80	600,000	600,000
Total Jan. 1, 1889 .....	412	13,381,000	39,851,000
Total Jan. 1, 1888.....	359	12,146,000	34,935,000
Gain '88 over '87 .....	53	\$1,235,000	\$4,916,000

The following kind of business was represented in Denver during 1888. The wholesale and retail trade for 1888 was as follows:

Kind of Business.	No.	Capital Invested.	Business in 1888
Dry Goods, W. and R.....	5	\$2,500,000	\$5,000,000
“ “ and Fancy Goods, retl.....	65	300,000	1,000,000
Millinery, W. and R.....	3	300,000	350,000
Millinery, retail .....	30	150,000	250,000
Drugs, W. and R.....	3	300,000	425,000
Drugs, retail .....	65	500,000	600,000
Leather and Findings, W. & R.	10	800,000	1,150,000
Saddlery, retail.....	19	400,000	500,000
Groceries, wholesale .....	3	2,250,000	9,000,000
Groceries, W. and R.....	5	800,000	3,500,000
Groceries, retail .....	275	1,200,000	5,500,000
Liquors, wholesale.....	13	500,000	4,000,000
Liquors, retail.....	225	600,000	4,500,000
Furniture, W. and R.....	5	400,000	9,000,000
Furniture, retail .....	25	400,000	500,000
Hardware, W. and R.....	3	350,000	1,000,000
Hardware, retail .....	35	400,000	900,000
Musical Instruments, W. & R.	8	300,000	500,000
Jewelry, W. and R.....	3	275,000	400,000
Jewelry, retail .....	36	550,000	500,000
Meat Packers .....	3	350,000	2,500,000
Meat Markets .....	62	125,000	400,000
Game and Fish, W. and R.....	5	150,000	500,000
Photography, W. and R.....	1	100,000	250,000
Photography, retail.....	25	70,000	100,000
Merchant Tailors.....	27	120,000	750,000
Produce Commission .....	59	1,200,000	5,500,000
Printers and Newspapers.....	56	500,000	800,000
Restaurants .....	36	200,000	1,000,000
Hotels .....	44	1,500,000	3,000,000
Cigars, wholesale .....	6	300,000	5,000,000
Cigars and Tobacco, retail.....	58	150,000	600,000
Wall paper & Paints, W. & R..	12	250,000	400,000
Hats and Caps, W. and R.....	3	210,000	500,000
Hats and Caps, retail .....	10	100,000	200,000
Teas and Coffees, R. and W....	13	100,000	300,000
Blacksmiths .....	40	100,000	250,000
Carpets, W. and R.....	6	600,000	750,000
Carpets, retail.....	7	300,000	250,000
Coal, wholesale.....	12	1,000,000	2,000,000
Coal, retail.....	37	150,000	900,000
Agricultural Implements .....	4	700,000	1,500,000
Plumber and Gas Fitters .....	22	200,000	500,000
Live Stock.....	20	3,500,000	3,000,000
Fruit and Confectionary .....	47	300,000	1,200,000
Clothing, W. and R.....	4	500,000	600,000
Clothing, retail.....	52	500,000	1,000,000

Kind of Business.	No.	Capital Invested.	Business in 1888
Boots and Shoes, W. ....	2	150,000	600,000
Boots and Shoes, R. ....	65	650,000	1,100,000
Books and Stationery, W.& R. ....	5	200,000	500,000
Books and Stationery, R. ....	38	325,000	400,000
Livery.....	30	400,000	800,000
Undertakers .....	6	100,000	125,000
Contractors and Builders.....	96	500,000	9,750,000
Theatres.....	4	750,000	5,000,000
Transfers and Express .....	210	200,000	500,000
Toys.....	2	50,000	75,000
Loans .....	15	3,000,000	25,000,000
Real Estate .....	375	20,000,000	40,775,000
All others .....	200	1,000,000	3,000,000
Total 1888.....	2554	\$43,875,000	\$156,350,000
Add Manufactures.....	412	13,381,000	39,851,000
Total Business, '88, .....	2966	\$57,256,000	\$196,201,000
Total Business, '87, .....	2331	49,021,000	157,070,00
Increase in '88 over '87.....	635	\$ 8,235,000	\$ 39,131,00

It therefore appears Denver has gained 635 in number of business houses, more than 25 per cent., during 1888; \$8,236,000 in capital invested, more than 15 per cent., and in volume of business \$39,131,000, nearly 25 per cent. The increase of express, postoffice and railroad business is not quoted because we have not mentioned them in our lines of business. The railroads and express companies all pay off in Denver, and would add about \$10,000,000 in business, exclusive of freight received, etc., etc.

Freight and passenger receipts in Denver from the eighteen railroads aggregate \$25,000,000 for 1888.

Postoffice, total business done in 1888, \$7,500,000.

The land office, \$600,000, making a grand total of business for the year, exclusive of salaries paid, \$229,301,000.

Railroads and express companies employ about 10,000 men in the state; the majority are paid in Denver; amounts to about \$10,000,000 per annum.

The 412 manufactures employ about 8,500 men; amount paid for salaries, about \$6,000,000.

All other business employs, exclusive of proprietors, about 8,500 book keepers, clerks, typewriters, etc., at an annual salary paid approximating \$7,000,000, or in round numbers for all kinds of employment in Denver are paid approximating \$20,000,000 per annum, which, added to the volume of business, makes a total business, exclusive of clearing house transactions, amounting to about \$250,000,000. Add clearings, \$130,000,000, and we have a grand total of business done in Denver during 1888 of \$380,000,000.

#### POSTOFFICE.

The Denver Postoffice is a fair business barometer. Average weight of newspapers mailed daily during 1886, 1,753 lbs.; 1887,

2,330 lbs.; 1888, 2,876 lbs. Total weight of mail dispatched daily during 1886, 3 tons; 1887, 4 tons; 1888, 5 tons.

## PORT OF ENTRY.

During the last year the business men of Denver did not avail themselves to any great extent of the privilege to have merchandise transported without appraisement at the port of entry. The total number of packages so transported was 1,669, having an invoice value of \$128,897, and upon which the estimated duty was \$81,629.30. This showing, though, is a great way ahead of that made by Omaha, the principal local competitor in trade, as the business interests there located imported direct but 1,270 packages, of the invoiced value of \$14,035, and upon which there was an estimated duty of \$7,985.75. There is a gradual increase in the direct importations of Denver, however, as can be seen from the statement here given:

In 1883, the year the privileges of the immediate transportation act was extended to the city, the invoice value of the goods transported in bond was but \$8,496, on which the estimated duty was \$3,997.63. In 1884 the invoice value was \$49,440, and the duty \$31,852.36. 1885: invoice value, \$47,897; duty, \$32,622.94. 1886: invoice value, \$57,059; duty, \$44,640.48. 1887: invoice value, \$104,586; duty, \$83,736.74.

From these figures it is apparent that the merchants of Denver are steadily extending their commercial operations, and it is probable that in the near future a large proportion of the foreign goods sold in the local market will be of direct importation.

## CLEARING HOUSE.

The Denver Clearing House Association is another barometer which gauges with some show of fairness the progress of business. The Denver Clearing House Association is composed of the First, Colorado, German, City, State and Denver National Banks, and the Union Bank, organized under state laws. The statement below exhibits their condition at the close of 1888 and for the five preceding years. There have been no failures among the well-founded banks established here, nor have they been shaken by any financial convulsion, local or national.

	Cash.	Loans.	Capital.	Deposits.
December—1883.....	\$4,592,266	\$4,982,991	\$1,646,457	\$8,085,979
December—1884.....	4,486,696	4,603,639	2,070,076	7,206,470
December—1885.....	5,249,344	5,763,489	2,139,649	9,089,324
December—1886.....	5,641,565	7,399,334	2,296,575	10,889,715
December—1887.....	5,235,830	9,544,557	2,357,250	12,542,693
December—1888.....	5,812,474	11,060,874	2,735,966	14,307,197



In addition there are five private banking houses and two savings banks, one additional national bank now forming.

## CLEARINGS BY MONTHS—1888.

January .....	\$ 9,508,607 49	.....	Gain, 20.5 per cent.
February.....	9,573,366 50	.....	Gain, 35 per cent.
March .....	10,486,247 70	.....	Loss, 1.2 per cent.
April .....	10,920,441 43	.....	Gain, 0.1 per cent.
May .....	11,194,230 28	.....	Gain, 2.8 per cent.
June .....	11,366,474 61	.....	Gain, 12.3 per cent.
July.....	10,689,294 12	.....	Gain, 17 per cent.
August .....	11,145,664 07	.....	Gain, 12.8 per cent.
September .....	11,281,866 65	.....	Gain, 12.3 per cent.
October .....	12,804,031 14	.....	Gain, 16.5 per cent.
November .....	11,923,030 03	.....	Gain, 19.1 per cent.
December .....	13,072,954 39	.....	Gain, 27 per cent.

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\$133,965,200 41

## INSURANCE.

Insurance is an excellent test of the growth of a city. In life insurance in Denver the new risks written in 1888 amounted to \$8,923,484, against \$3,864,194.53 in 1886, the premium receipts being \$756,287.36 and \$415,484.65 respectively. The increase in business in 1888 over 1886 was \$5,059,289.47, and in premiums \$340,802.71. In fire business the whole amount of new business written in 1888 amounted to \$61,821,626.20, against \$45,532,753.42 in 1886. The premium receipts for 1888 amounted to \$1,120,000, against \$861,850 in 1886. The increase of business in 1888 over 1886 was \$16,288,872.42, and in premiums \$258,150. There is nothing one-sided about the growth of Denver. Population and property increase in unison, and no other city in the country can show as good a record as this.

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## IRON MANUFACTURES.

*Written by Frank Hall for the late Report of Chamber of Commerce.*

As there has been some discussion as to the origin of iron manufacture in Colorado, it is perhaps well to give a brief sketch of its history.

In 1860, Messrs. Fraser & Schoville—the senior being now at the head of the well-known Chicago firm of Fraser & Chalmers—established a foundry and machine shop on half a block of ground on the west side of Larimer street, near the present terminus of the horse-car track, the land having been donated for the purpose by A. C. Hunt. They manufactured various kinds of castings and machinery adapted to the wants of the country in that early day. In December, 1860, the

works were purchased by Joseph M. Marshall. The raw material was old machinery, which had been wagoned across the plains, but never used. In August, 1861, Mr. Marshall made an examination of what are now the Erie coal fields, in search of fire clay, and at length made the discovery and location of the coal mine, which has since borne his name. While digging for clay, a deposit of excellent brown hematite iron ore was exposed, and a lot of samples were brought to Denver and smelted in a blacksmith's forge. The result being very satisfactory, in June, 1863, a small, experimental cold blast furnace, equal to the reduction of about two and a half tons of ore daily, was erected near the Marshall mine. Though the ore was abundant, owing to faulty construction the furnace did not work. The hearth melted down, and it was not until the spring of 1865 that the furnace was remodeled with new hearths that could stand the heat. During the three months following something over two hundred tons of excellent pig iron were produced.

The best selected ore assayed 68 per cent. of iron, yielding 55 per cent. in the furnace. The ore was quite pure, melting readily and working equal to the best of its class found in Pennsylvania. From each 40,000 pounds of crude ore, 2,240 pounds of pig iron were produced. After these experiments the enterprise was abandoned, owing to the vast supply of scrap iron, in the form of useless machinery, brought in from the East.

In 1862 the foundry and machine shops were moved to Black Hawk, in Gilpin County, when a company, composed of J. M. Marshall, A. G. Langford, Wm. L. and Milo Lee, the last two of the Black Hawk Gold Mining Company, was organized. These works, so established, have been in operation continuously, though not under the same management, from that day to the present. Hendrie & Bolthoff, or rather the Hendrie Brothers, established similar works in Central City about the same time.

To illustrate the difficulties which beset these pioneers in the iron trade, it may be stated that wages and all iron materials, except scrap iron, were very high, and the anthracite coal required for a portion of the work had to be brought from Pittsburg by rail to the Missouri River, and thence in wagons over the plains and mountains, at a cost of 27 cents. per pound, or a total cost of \$550 per ton. Of course this extravagant rate did not prevail at all times, but there was little modification from 1863 to 1866.

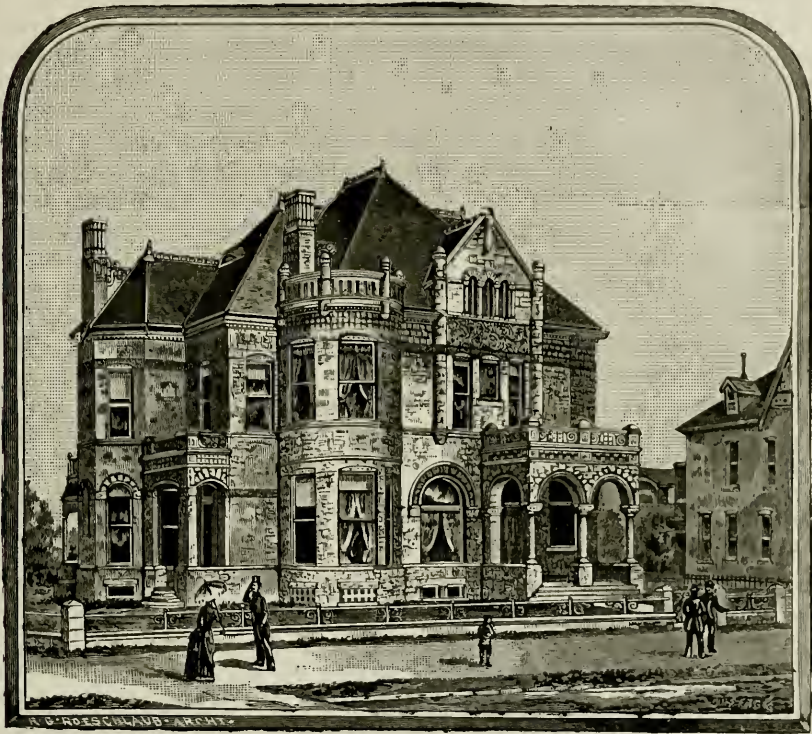
For a number of years Mr. J. W. Nesmith, now President of the Colorado Iron Works, located in Denver, was the active manager of the Black Hawk foundry and machine shops. In 1870 Mr. J. W. Jackson, of Paducah, Kentucky, erected a plant in Denver, for the manufacture of mining and other machinery, and these two have been continuously operated with satisfactory success. Subsequently, and well within the epoch of Denver's greatest development, Messrs. Hendey &

Meyer established their machine shops near those of the Colorado Iron Works. Since then various other concerns in the manufacture of engines, mills, boilers and other iron work, among them F. M. Davis, now an extensive manufacturer of boilers and machinery, established in 1874; C. H. Shaw, and others, have joined the procession.

To return to the subject indicated in the caption of this article, it is proper to state that the greater part of the iron work made in Denver had its origin in scrap iron. The foundries import the larger share of their pig iron from cities east and south of the Missouri River, getting some of their supplies, however, from the Colorado Coal and Iron Company at Pueblo. With such facilities in the way of raw material, a great deal of very superior mining, milling and smelting machinery is made, also fixtures for cable railways and architectural iron work for massive buildings. The machinery is chiefly used in the mines of our own state, though some is shipped to Old Mexico, Utah and Arizona. The experience of our manufacturers, gained by long familiarity with the needs of the country, has enabled them to meet more fully, perhaps, than the manufacturers of other states whose goods find a market here, its needs in the way of such appliances. If iron blast furnaces were to be established in Gunnison County, where exists unlimited quantities of superior iron ores, in conjunction with as good fuel for smelting as can be found elsewhere in the world, or in Middle Park, where in the neighboring mountains excellent coal and iron have been discovered, the problem of cheap pig iron for Colorado and all the country west of the Missouri River would be practically solved. It has been demonstrated that pig iron can be made at Gunnison for \$12 per ton. Presupposing that it could be delivered at the Missouri River at \$20 per ton, an entirely reasonable presumption, we should be able to control the iron market west of that line for all time to come. What is the obstacle may be asked? There are a number. Chief among them is the want of an organized effort, supported by abundant capital; but the second is an understanding with the railways that will permit the shipment. The first prerequisite supplied, the second can be enforced. It would seem that an industry of supreme importance to the city of Denver, one in which the vital forces of its future are involved, should find advocates and friends, and above all, earnest workers who will leave no stone unturned to accomplish this great purpose. Any student of the situation will mark this project as the keystone of the future. We are as a harbor without defenses, constantly liable to attack from without, and to be seriously damaged, if not destroyed, by neglect to fortify against such contingencies. Nothing can be more patent to observing men, that to succeed in founding a manufacturing center here, and thereby fortify the city against formidable dangers, the foundation must be made of iron—pig iron. With the ore within easy reach, and surrounded by all the auxiliaries to successful manufacture at a cost that



will enable us to compete with Ohio, Pennsylvania or Alabama, what is to hinder success? Nothing but defective management. There is not, in all the West, certainly nowhere else in Colorado, so grand an opportunity as this. And if Denver business men fail to work its solution, they will at no distant day discover how great is the mistake they have made.



Residence of Peter Gottesleben, Denver, Colo.

While our iron workers have been measurably prospered under disadvantages which few but themselves can appreciate, they cannot advance far beyond the present limit of production, certainly cannot invade outside territory with much force until they can be supplied with cheap pig iron directly from our own mines. We have briefly indicated how this may be done, and leave the problem and the responsibility where it belongs. If this project had received the attention it so richly merits five years ago it would have given this city a great power, which it does not now possess, through the location of foundries, rolling and nail mills, with many kindred industries, whose export trade could have been extended in all directions. Unless soon

supplied, our prestige will have departed to Pueblo or Trinidad, where the people have the keenest possible appreciation of the value of pig iron as the basis of prosperity.

The true base of manufactures in this country is iron. I can discover no way in which Denver can attain her laudable aspiration to become a great center of manufacture without a vast multiplication of industries upon a foundation whose principal constituent is iron. This essential base well established, there is reason to hope that this point of our ambition may be reached. It is manifest that such works as we desire cannot be secured while pig iron is lacking. This material cannot be shipped to us from the Missouri, or the Mississippi, or even from Pueblo, on terms for transportation that will justify the erection of large foundry and machine shops. Consequently, unless we can first secure blast furnaces either in the near suburbs, or at some convenient point in the adjacent mountains, where there are large bodies of rich iron ore, our progress must be limited to such expansion as the unfavorable conditions which now exist will permit.

In 1888 the Report of the School of Mines proved of great value as a compendium of information, gathered by its professors from many sources, the first of which gave a somewhat extended epitome of the resources of Gunnison County, from which we make certain extracts relating to iron. In this paper Prof. Chauvenet says:

"Whatever may be the future of the industry in the Gunnison region, there can be no reasonable doubt of the existence of good ore in great quantity. Nor do I think are the other conditions lacking for the establishment in the valley of the Gunnison of iron industries of great magnitude and importance."

After further preliminary observations, the report proceeds to an enumeration of the prerequisites of success in the manufacture of cheap pig metal:

"1st. Abundant ore running above 55 per cent. of metal, at a low cost of mining. 2nd. Coking coal, low in ash and sulphur, minable in large quantities. 3rd. Pure limestone. 4th. Reasonable proximity of all the mined products to the furnace site; and 5th. A scale of wages which will bring the item of 'labor per ton' well inside of two dollars."

"Given such conditions and a market, only the most blundering mismanagement could fail." In all these respects, he argues, "Gunnison County seems to be favored far beyond the majority of furnace sites in the United States." It is also stated that pig iron can be produced as cheaply in the section named as in the most favored regions of Alabama. Again, the pig iron of Alabama "is of a quality which unfits it for all such uses as require a non-phosphate composition, which is precisely what can be guaranteed at Gunnison."

## DENVER INDUSTRIES.

Denver has one zinc furnace works, with a capacity of ten tons per day. Three wire goods manufactories, with capacity for most state demands in that line. Carriage, car and wagon factories, three or four of the largest of which can supply orders from all the surrounding territories, as well as Colorado, and one of which (Robertson & Doll) cannot be excelled in appointments to turn out the finest chariot that runs on wheels this side of New York. Brewster's best make is here duplicated.

Kibler & Co.'s stove works at Irondale are just starting up, with a capacity of 1,000 flasks per day. Very rapidly the iron workers of Denver are creeping up alongside the engine, boiler and machinery manufacturers of the Eastern states, to supply with portable and stationary machines all the mining districts of this state and neighboring territories. The railroads no longer discriminate so unfavorably as formerly against the Colorado manufacturer.

Silver plating is extensively done at the Cresswell Works. We have several large roofing manufacturers, who can supply all orders at a moment's notice. The refiners of gold and silver number several, and Denver has the largest reduction and smelting works of the world. New quarries are being opened for every variety of stone throughout the state; granite and sandstone in several colors and marble in every color known to the prism. One pump manufacturer, and room for two or three more. Several powder mills, awaiting the motion of the trade to start up, though now closed down till proprietors give the nod. One lead pipe works in Denver and a somewhat larger works in Pueblo.

The little paint works, started by two young Philadelphia apprentices in 1885, have now grown to immense works, covering acres of ground, under the proprietorship of the Hallack Paint, Oil and Glass Co., with unlimited capital to back it, and the millions upon millions of tons of Colorado mineral paint rocks in all colors. Several oil refineries in the neighborhood of the rich flowing wells in the southern and central portions of the state, and the successful working of newly discovered veins in the northern part will bring like industries there.

Nail manufacture is at present confined to Pueblo chiefly; but the works there are upon an immense scale. Eight flouring mills, sash and blind factories, iron foundries, soap works, breweries, gas works, chemical works, canning factories and packing houses, engine and boiler machinery manufactures and brick yards are on a large scale, and will bear very favorable comparison with those of the same line of productive industries anywhere in any of the older states, and some of them are marvellous in their rapidity and strength of growth. We here take occasion to cite a few not yet instituted that would pay



well: Bell and gun metal works, cutlery, glue and papier mache shops, agricultural tools and machine works, wire drawing, starch works, files and awls and white lead works, gunpowder and miner's candle works, torpedoes, etc., pottery works and porcelain faced brick manufacture, woolen yarn and blanket factories, wool scouring works on an extensive scale, cheese factories, lead, zinc and brass sheet metal works, stamp mills to mould the same into ware of all kinds, malleable iron works, galvanized iron works, straw paper and straw board manufacture, comb and button works, iron, gas and water pipe manufacture, more extensive clay pipe works; carriage axles and springs will yet be made to such advantage here of Colorado iron and steel as to supply the entire West, from the Mississippi River to the Pacific Coast, and to export to countries and islands of the seas and far East. Suitable manufacturing sites are to be found in great plenty on every hand, and although Denver may be limited in water power privileges, yet she has an abundance of cheap fuel with which to generate steam power, and she is now using oil advantageously. Every manufacturer well grounded and established here is a permanent acquisition of wealth to the city and state, and will now be appreciated and welcomed as never before. All the lines of metal manufacture can prosper if conducted by experienced and judicious managers, with much less capital than is required in the Eastern states, and will find plenty of intelligent and economical labor here awaiting employment, whose working days will make a full year, as a rule, because of the extraordinary good health prevailing.

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#### REAL ESTATE.

The following was a contribution to the Chamber of Commerce report for 1889, by John E. Leet, and is worthy of reproduction, as it is in the direct line of the author's oft-written articles upon the same subject:

The story of the real estate market for 1888 is one of unparalleled prosperity. Throughout the year values in all parts of the city have advanced with a firm and steady step, the quantity and quality of building has been unprecedented, the average of rents has risen, the average of interest paid on loans has fallen, and in short the situation has been as buoyant as it well could be without actually breaking out into a boom.

According to our city directory estimate, an authority which has always heretofore been verified by the actual census, our population has increased 30,000 during the year, and is now 125,000. The actual increase justifies a large percentage of advance in values. But the city, rapid as has been its growth, has only been catching up with the surrounding country, which had been filling up steadily during several

years of relative depression in Denver. There was general surprise at the revelation made by last November's vote, which showed that even in 1888 the state had gained a greater percentage of population than the city. But more important than the actual increase of population and building has been the increase of the city's prospects during the year. Not only have her commerce and manufactures been greatly expanded, her trade territory enlarged, and her railroad position



City Hall, Denver, Colorado.

wonderfully strengthened, but, what is of vital and far-reaching importance, she has emerged from the background into full view of the investing world, and has completely supplanted Kansas City as the favorite rising western city for the investment of eastern capital. This fact is of stupendous significance. Denver's great achievements, heretofore, have been those of home capital. Now that the golden stream of eastern investment, which lifted Chicago from the swamps, and later built up Kansas City, is pouring in to help us, our horizon is at once immensely enlarged and our possibilities become dazzling.

Nine great occurrences within a year, each alone of immense importance, go directly to build up and confirm the commercial greatness of Denver. They are the successful inauguration of the project for storage reservoirs for irrigation, the deep-water harbor movement, the declaration by the nation that the protective tariff, which will make Colorado a second Pennsylvania, is to be continued, the completion of the Texas and Gulf railroad, the completion of the Missouri Pacific railroad, the completion of the Rock Island railroad, the completion of one of the cable systems, the enforcement of the Inter-state Commerce Law, and the influx of investment capital. We have scarcely as yet commenced to reap the fruits of these important contributions to our greatness, but the certainty and vastness of each tremendously strengthens our position.

The expenditure of \$100,000 by the government for preliminary surveys for irrigation reservoirs, which is now being made, is an epoch in our history of such far reaching consequence, that it can only be compared to the discovery of drifting of gold in the sands of Cherry Creek. The government has been committed during the year to a policy of reclamation of the arid region, which will be to us in point of annual appropriations what the river and harbor bills have for a generation been to the eastern half of the country. But the beneficial results will be immeasurably greater. Every completed reservoir will display at once its fruit of golden grain, and give birth to a new agricultural community and a flourishing village. The nation will applaud the work, the appropriations will increase from year to year, from decade to decade, until a population of millions, engaged in agriculture alone, will be tributary to this city.

The movement for a deep water harbor on the Texas coast has, during the year, taken definite shape, and has received such an impetus that it is already a national issue, which few venture to oppose. It is as certain of consummation as the Mississippi jetties. The Deep Harbor Convention held in this city attracted the attention of the commercial world, and, as an advertisement alone, was worth ten millions to this city. It will also yield actual commercial results before the digging of the bar at the chosen harbor begins, by reminding shippers all over the world that, to some extent, they can even now reach the inland empire, of which Denver is the metropolis, by the Gulf route. Indirectly, but certainly, this great convention has already done Denver much actual good by leading the railroad managers to more fully recognize her claims as a terminal and distributing point. When the harbor is completed, Denver will be to the arid region what Chicago is to the Upper Mississippi and Missouri valleys. She will be the distributing center for all goods imported from foreign nations.

The settling of the tariff issue in favor of protection benefits Colorado more than any other state. It is her ambition to be the



manufacturing center of the region west of the Missouri, and to supply the new population as it grows, especially with iron goods. Her infant industries could not get along as well without protection as could the established industries of Pennsylvania. We have a protective tariff in the rail haul from the East, which fully compensates for our higher priced labor and capital, and now we are secure against not only foreign competition, but also against the competition we would meet from Pennsylvania if her laboring millions were compelled by free trade to work for European wages.

The completion of the Gulf road was a truly great event, the first fruits of which we have already tasted with much satisfaction. It has strengthened our freight situation, contributed to our recognition as a distributing point, brought the cattle trail to our door, opened our summer resorts to the empire of Texas, which is growing in wealth; opened to settlement a large region tributary to this city, and added a million people to the consumers of Colorado coal; and yet the work of this line has hardly begun.

The acquisition of the Missouri Pacific and Rock Island during the year are really great events, which our people do not fully appreciate. The objection is made that we already had enough lines to the Missouri River, and that what we need is another line to Wyoming and a road direct across the mountains to Northwest Colorado and Ogden. The two latter we do sorely need, but we cannot have too many roads coming in from the eastward. Such roads are no longer to be thought of as mere transports of manufactured goods from the Missouri River to the mountains. On the contrary, they are to be regarded chiefly as coal roads, built to haul coal from our mines to the teeming agricultural populations for 500 or 600 miles along their lines. A dozen more must be built. The Northwestern from Hastings, and the Illinois Central from Sioux City, and another Union Pacific line from Lincoln are almost certain to be constructed into Denver the coming year. The agricultural settlements sustain them with local traffic until within 200 miles of the mountains, when the fuel necessity forces them to build the balance of the distance for coal. Some of these roads may cross the mountains, but this "going on to California" is no fun, and Denver will practically be the terminus for most of them for years to come. In short, Denver is already a great terminal point. Once here for coal, these roads struggle for a share of the general traffic, they advertise the city and state, and do us an immense amount of good. Their construction reveals to us the tremendous importance of our coal measures. The Missouri Pacific and Rock Island are great systems, each having 5,000 or 6,000 miles of track. The same is true of the other roads that are coming. It is no small thing to acquire such powerful friends and to be their real terminal.

The seventh great event of the year for Denver is the inception, construction and completion of three of the cable lines of the great tramway system. This is only the inception of cable construction, for not only will the tramway company build several more lines in 1889, but the City Company has let contracts for four lines. By the end of the year Denver will have as fine a rapid transit system as any city in the country.

The eighth is the successful enforcement of the Interstate Commerce law by the celebrated Martin case, which broke up the outrageous discrimination by which sugar, nuts, fruits, wines and other goods from California could be shipped from San Francisco through Denver to Kansas City and back to Denver for the same rate as from San Francisco direct to Denver. This will enable us to distribute goods from the West eastward to the Missouri River.

The ninth great event for the city was the actual beginning during the year of the influx of Eastern capital for investment, which we have been hoping for so long. It is actually arriving in large quantities.

The nine great events discussed above are simply nine new elements of our strength and development, the contributions of a single year. All the previous resources upon which we relied remain and have been developed in every direction. Our commerce has continued to expand, our population has increased with greater rapidity than ever, our manufactures have multiplied, our agriculture has grown wonderfully, our prolific gold and silver and lead mines have employed more men and yielded enlarged products, our smelters have increased their capacity and widened the area of their ore purchases, the rearing of fine stock has taken a fresh impetus, the influx of the best class of Eastern people has exceeded anything heretofore known, and the prices of all our products have been well maintained.

The arid region reaches from a line passing through Central Kansas to the Sierra Nevada mountains, and from the British to the Mexican line. It contains sufficient territory to make 37 states, each as large as imperial Ohio. Of this inland empire Denver is the chief city and central star. She is the charming residence city of its leading and wealthiest families. Here the owner of the Arizona mine dwells, next to the proprietor of a cattle ranch in Montana, or the promoter of an irrigating ditch in Idaho. Wherever in all this vast region an enterprising man makes a fortune, and wishes to give his family the best educational and social advantages this side of New York, he comes to Denver to live, and this point naturally becomes the headquarters of his enterprises; from all over this arid empire, our smelters gather ore, and our merchants are beginning to gather trade. To all parts of it our manufacturers ship mining machinery, harness, saddles, iron goods, crackers, soap and other articles. All over it our people have money invested in gold and silver mines, coal mines, cattle and

horse ranches, town and mill sites, irrigation ditches and lands, stores, and banks. To this city, as a final center, the railroad system of the region is gravitating. Here are rapidly centering the trans-Missouri headquarters of numerous commercial establishments, such as deal in single articles, and have agents in every village. For instance: the Singer Sewing Machine Company has a busy office with fifteen or twenty bookkeepers and typewriters constantly employed; they are posting the accounts of all agents west of the Missouri, and the general manager for that half of the Union resides here. The same is true of the Consolidated Oil Company, but the latter instead of importing its oil, as it did a year or so ago, now supplies the trans-Missouri region with Colorado oil. Numerous loan and investment companies are making this city the headquarters for their business, not in Colorado alone, but in the adjacent territories as well. Insurance companies will soon begin the same thing. This country is too far from New York, and too far from Chicago. The next point, the central point, the point which is far enough away from every other point, is Denver. It is the natural place for department headquarters for a hundred different articles of commerce. Everything is centering here.

It is a popular delusion that, because Denver's tributary empire is arid, it can never contain a dense population. The history of oriental nations refutes it—near Babylon a single storage reservoir maintained a million population by irrigation for 2,000 years, and when finally it broke, the garden spot became a desert. In India, countless millions have been crowded under irrigation ditches for generations. Indeed, there are portions of India that sustain a dense population by irrigation, and that without any living stream. Ditches 500 miles along hillsides run the sudden rainfalls into reservoirs, to be used as wanted. When our surface rainfall is thus gathered, and the full flow of their streams utilized, the immense agricultural productions of the arid region will dazzle the world. Then large sections of the arid region can raise crops without irrigation, others only need it occasionally. And in the mountains proper, it is estimated that enough potatoes can be raised without irrigation to feed a larger population than that of Ireland.

It is not extravagant to claim that the agricultural resources of the arid region, when duly developed, are equal to the task of feeding 50,000,000 people. This can be realized by calculating the wheat that can be produced by all the land susceptible of irrigation when the streams are all stored and used. But intensive culture and root crops will sustain many more.

However, if there was no agriculture in the arid region whatever, and everything consumed had to be brought in from Kansas and Nebraska, there would be a population in Colorado alone within 20 years, more than sufficient to make Denver a city of perhaps 1,000,000 inhabitants. This would be a state population of gold, silver and coal



miners, stone quarrymen, and manufacturing operatives, to say nothing of the thousands who come for their health. Indeed, Denver and Colorado, as they are now, are four-fifths made entirely independent of agriculture. And it must be remembered in this connection, that a mining village of 1,000 people in the Colorado mountains furnishes more than twice as much commerce to Denver and the railroads, as an agricultural population of 1,000 people in Nebraska furnishes to Omaha. The reason is obvious. The miners ship out all they produce, and ship in all they consume. The farmer does not. Besides, the miners live better and spend more.

### TRANSACTIONS IN REAL ESTATE.

Sales and Loans on Trust Deeds for 1888.

MONTH	Sales	Loans on Trust Deeds.	1887. Sales.	Loans on Trust Deed.
January .....	\$ 2,106,076	\$ 1,083,417	\$ 1,683,839 00	\$ 601,586 40
February.....	3,891,052	1,494,459	1,943,041 80	737,927 50
March.....	5,108,985	2,013,030	3,477,569 23	1,285,103 23
April.....	4,563,434	2,002,825	4,901,117 55	2,023,951 96
May.....	4,212,028	3,039,785	3,598,841 02	1,440,166 71
June.....	2,587,806	1,370,150	2,551,930 18	875,290 94
July .....	1,944,450	999,310	1,758,949 90	737,031 23
August.....	2,054,251	1,239,403	1,585,771 97	557,824 89
September .....	3,347,667	1,824,554	1,613,676 51	727,476 84
October .....	5,519,273	1,332,562	1,710,123 63	986,278 19
November .....	3,012,859	1,282,289	2,178,114 00	1,124,846 00
December .....	5,591,654	2,169,875	2,173,778 00	948,923 00
Totals.....	\$41,939,535	\$19,851,700	\$29,176,752 79	\$12,046,406 89

1888, Increase over 1887, 43.7 per cent. 1887, Increase over 1886, 165 per cent.

	1889.	1888.	1887.
January.....	\$ 6,355,259	\$ 2,106,076	\$ 1,683,839
February .....	6,375,412	3,891,052	1,943,041
March.....	6,111,029	5,500,985	3,477,569
Total.....	\$ 18,841,700	\$ 11,098,113	\$ 7,104,449

The activity of Denver real estate, and the interest shown by outside capital in this city, are demonstrated by these figures, showing the recorded transfers for the month of March, 1889, in four places, more forcibly than any other possible presentation can. The figures are obtained from the Recorder of Deeds, and are reliable in every instance:

St. Paul.....	\$1,782,847	Kansas City.....	\$5,364,684
Omaha.....	2,344,052	Denver.....	6,111,029

Long's Peak, from Estes Park, Colo., on line of Union Pacific Railway.



In connection with real estate, we introduce to our readers some of the successful dealers in Denver property as an example to others who may desire to come West, and grow rich and influential, as those we mention have done. Almost without exception, they came West to improve their health, which an eastern climate had impaired. In addition to health, they have gained wealth and influence, to-day standing as monuments, directing the energetic youth of the East to the golden fields of Colorado.





### DONALD FLETCHER.

**M**R. FLETCHER was born in Coburg, Canada, September 29, 1849. Here he passed the days of his boyhood. At the age of 17 years he removed with his parents to Chicago, where he attended the best private academies, and then entered the university of New York, where he graduated with high honors. In 1879 Mr. Fletcher came to Colorado. His coming at that time, and the result of his decision to remain in Colorado, is the best possible illustration of the health restoring virtues of the climate. In Chicago his health was broken, and he became a physical wreck, so complete that his physician set a short limit to his life. He came to Colorado for his health. Under the benign influence of the climate the process of recuperation soon began.

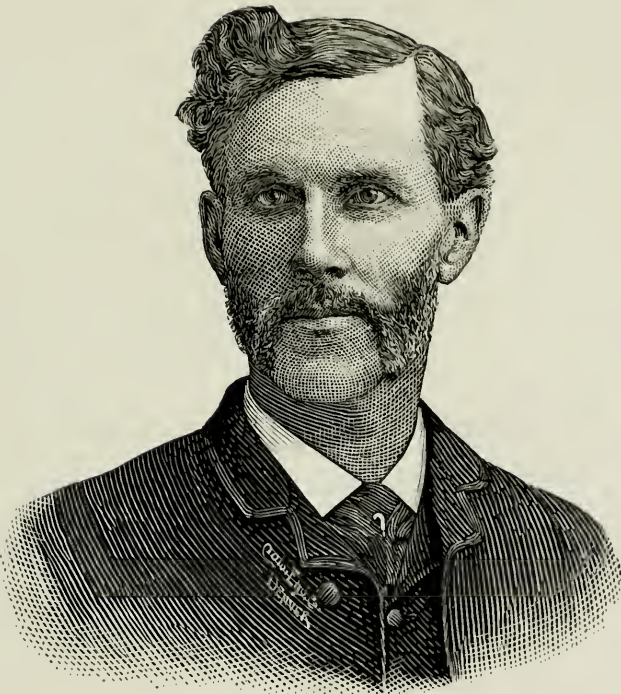
Then he went to work, first as clerk for the Denver & Rio Grande Railway; after a short time he entered the real estate business in a small humble way, after the fashion of poor young men, and by plain, honest methods of business, after a career of not more than seven years, he made a considerable fortune, and established himself as one of the most useful citizens of Denver.

Mr. Fletcher served as President of the Denver Chamber of Commerce during 1888, and upon his retirement from office, made such a ringing address upon Denver's progress and prospects, as to form the best kind of immigration literature, and was praised and complimented throughout the land. He is a gentleman of broad views and acute judgment, liberal in every just cause, and is one of Denver's greatest benefactors. Recently Wm. D. Tood, long time cashier of the Union Bank, and treasurer of the Chamber of Commerce, was admitted to a partnership with Mr. Fletcher, and the style of the business changed to Donald Fletcher & Co., real estate and investment bankers. They have recently moved into the new Jacobson block, one of the finest in the city, opposite the Tabor Grand Opera House, and new postoffice. Their office is on the first floor, handsomely fitted up, and fully equipped for the large business they enjoy.

Mr. Fletcher has made Capitol Hill property his specialty for years, being among the first, if not the very first, to stake his faith in that portion of the city. On the site of his first success in the real estate business, he is now erecting a palatial residence of unique architecture and of marvelous completeness.

In March, 1888, Mr. Fletcher was elected President of the Board of Immigration. An active man, such as Mr. Fletcher is, at the head of such a bureau, can do immense good to the state at large. Among the greater public measures that finds a champion and prophet in Mr. Fletcher, are a direct railroad line to the Missouri River; a direct railway across the range to California, and the speedy consummation of the proposed reservoir system for the storage of water.

Mr. Fletcher has particularly distinguished himself, lately, as the foreman of the best grand jury in the United States. Plutarch like, Donald Fletcher believes in serving his country well, in whatever capacity he may be called to act. Plutarch says: "The meaner the office you sustain may be, the greater is the compliment that you pay the public." Plutarch was commissioner of sewers in his little city, and when rallied for measuring tiles, or for calculating a quantity of stones or mortar, he answered: "It is not for myself that I do these things, but for my country." No doubt Donald Fletcher contains just such elements of greatness, and we will not be surprised to see him mount to the topmost round of the ladder of fame.



W. G. SPRAGUE,  
Denver, Colo.

Delegate to Fort Worth Deep Harbor Committee.

See Sketch on next page.



## COLONEL W. G. SPRAGUE.

WELLINGTON G. SPRAGUE was born in Ohio, and while yet a child, removed with his parents to Wisconsin; was educated at Hillsdale College in the State of Michigan. The war broke out soon after he graduated, and, responding to President Lincoln's call for troops, he enlisted and served during the war. At first he was in the Volunteer Service, but being rapidly promoted he was attached to the regular army, and promoted for meritorious service to the grade of Brevet Lieutenant-Colonel. Col. Sprague was severely wounded in the siege of Richmond, Va. After his recovery he again joined his command, and served in the regular service during the Re-construction Days, being located in the southern states.

In 1870, ill health overtook him, the result of his injuries received before Richmond, which compelled him to resign his commission and seek a healthy climate. His attention was directed to Denver, where he moved in 1871 with his family; the climate having agreed with him he has since resided here, and avers that the remaining days of his life will be spent in Colorado.

Every public enterprise that has been undertaken in Denver since 1871, has received Colonel Sprague's assistance. He was one of the original members of the Denver Chamber of Commerce, and of the Real Estate Exchange, in both organizations he is a valued member. He is an extensive operator in real estate and owns valuable property in Denver and throughout the state. He has made a specialty of loaning money, having control of large amounts of cash of Denver and non-resident capitalists, besides his own large fortune.

Colonel Sprague was active in obtaining for Denver its first rolling mill, and was for a time president of that concern. He was a delegate from the Real Estate Exchange to the initial deep harbor convention, held at Fort Worth, Texas, in July 1888, and subsequently to the Inter-State Deep Harbor Convention, held in Denver, August following. In all enterprises affecting the interests of Colorado, we find Col. Sprague an earnest worker and valuable advocate.



IRA R. HOLMES,  
President Inter-State Town and Land Company,  
Denver, Colorado.

See Sketch on next page.

## I. R. HOLMES.

THE portrait on the other side of this leaf is a life like engraving of I. R. Holmes, President of the Inter-state Land and Town Company. Mr. Holmes is one of the most active and enterprising men in the country, being one of those indomitable spirits that one finds only in the West. The company of which he is the head is an incorporation with a capital of \$1,000,000, the officers and leading stockholders being, like Mr. Holmes, men of push and energy.

The company are large holders of real estate in many of the western states and territories, but at present they are giving most of their attention to their property in Ogden, Utah, which, after looking over the whole field, they have concluded is to be the great city of the West.

They have succeeded in getting very low rates to Ogden and return, and are running excursions there about every 30 days. Their initial trip was made on April 17th, which was the largest and most successful excursion ever run out from any point in the west.

Ogden surely gives promise of being all, and more, than this company at its organization dared hope for. It is one of the most prosperous, as well as one of the most beautiful, places in the country, and stands without a peer among western cities.

As a place for investment there is no doubt but what Ogden offers better inducements than any point on the continent. Her property is still low, and money judiciously placed is sure to return a large profit.

For further particulars about Ogden, dates of excursions, plats of property, etc., etc., address Inter-state Land and Town Co., Room 9, Windsor Hotel Block, Denver, Colorado, or Swan, Holmes & Co., Ogden, Utah.





S. ALLEN LONG.

**M**R. S. ALLEN LONG was born April 6th, 1827, at Pittsburg, Pa., in which vicinity his ancestors settled prior to the Revolution; his grandfather, Capt. William Long, led his company through the entire War of Independence. He was educated in the Western University of Pennsylvania at Pittsburg, the University of West Virginia at Morgantown; entered Jefferson College (now "Washington and Jefferson"), at Canonsburgh, Pa., in 1845, graduating with high honors in 1848. Returning to Pittsburg, he embarked in manufacturing, and soon became prominent in every public movement for the development of the Iron City.

In 1852 he was called into the City Council; in 1855 was elected president of that body. From 1853 to 1859 he was a director in the Baltimore & Ohio Railroad from Pittsburg to Cumberland, and also in the Panhandle line, now the Pittsburg, Cincinnati & St. Louis. In 1875 he removed to Philadelphia, and in 1880 located permanently in Denver. He has been, and still is, identified with all the leading interests of Colorado—mining, agriculture and stock raising; he is an active member of both the Denver Chamber of Commerce and the Real Estate Exchange.

Mr. Long is a frequent contributor to the Denver press, and has been one of Denver's most sanguine supporters and promoters. As early as 1880 he made predictions regarding the future of Denver, which were ridiculed as the impulsive utterances of an enthusiast too wild to receive any consideration. In less than nine years Mr. Long has seen his predictions more than fulfilled, and his utterances of 1880 are now regarded as prophetic by the scoffers of that year. Foresight and nerve caused Mr. Long to invest his money freely in Denver realty, and, as a result, his worldly store has been considerably increased, and the name of S. Allen Long appears frequently on the county records in connection with important transfers of realty.

In 1881 Mr. Long was married to Miss Henrietta Fitton, of Philadelphia, who has since been his constant companion and able advisor; they reside upon Mr. Long's mammoth farm, "Rothewood," situated about eleven miles south of Denver, on Broadway, a highly improved and valuable piece of property. Mr. Long is the owner of Longmont addition to Denver, and of the suburbs—Coronado, Seminary Hill, South University Park, and other valuable properties, worth several times as much at this time as when purchased by him. In addition to his real estate business, we find Mr. Long devoting considerable time to public measures.

In June, 1887, he was a member of a committee from the Chamber of Commerce to investigate and report to that body regarding the indications of natural gas which were said to exist near Denver. The preparation of the report was left to Mr. Long, and a more complete document never emanated from any committee in Denver; it was complete in every detail, and established the fact that natural gas does exist in paying quantities near Denver. The report was published in the *Denver Republican* June 25th of that year, and is the foundation upon which the present prospecting is being done, which will, without doubt, give Denver cheap fuel for manufacturing and heating purposes, and Mr. Long will be ever remembered as the greatest benefactor that Denver ever had.



SENATOR ADAIR WILSON,  
Denver, Colorado.  
Member of the Inter-State Deep Harbor Committee.  
See Sketch on next page.



## SENATOR ADAIR WILSON.

HON. ADAIR WILSON was born in Saline County, Mo., November 16, 1841; educated at Masonic College, Lexington, Mo. In 1859 he commenced the study of law under his uncle, Judge Abiel Leonard, of Missouri, and was licensed to practice in 1861. In the spring of 1861 he came to Colorado, where he remained only a few weeks, however, and continued his journey across the plains to California. He entered the law office of his uncle, Gen. John Wilson, of San Francisco, where he remained until March, 1863, when he went to Virginia City, Nevada, and accepted a position as city editor of the *Virginia City Union*. In the fall of that year he went to Austin, Nevada, where he was editor of the *Reese River Reveille*. In 1865 he returned to San Francisco and held editorial positions on several of the newspapers of that city.

In 1867 Mr. Wilson returned to Saline County, Mo., and remained there in active practice of the law until 1872, in which year he returned to Colorado and located in Pueblo; since that time he has lived in Colorado continuously and been in the active practice of law. In 1873 Mr. Wilson removed to Del Norte. In 1875 he was elected to the last Territorial Council from the Eleventh District, and, during the session, served as president of that body. In 1876 he was a delegate from Colorado to the Democratic National Convention. In 1880, at the Democratic State Convention held at Leadville, he was unanimously nominated for Governor, but declined the nomination. In 1886 he was elected to the State Senate from the twenty-first senatorial district, composed of the counties of Rio Grande, Saguache, Hinsdale, Ourray, San Miguel, San Juan, Dolores and La Plata.

Senator Wilson has served his constituents with honor to himself and with great credit to the large district that he represents; he has been very active in the progressive movement for deep harbors on the Gulf coast of Texas, and it was mainly owing to his efforts that the late Legislature of Colorado appropriated \$2,500 towards paying the expenses of the Colorado contingent of the Inter-State Deep Harbor Committee, of which he is an active and valuable member. The senator has recently opened a law office in Denver, where he now resides. He is known throughout the West as an able jurist, and is an honored member of the bar.



F. D. MORSE,  
Director in Real Estate Exchange.  
Denver, Colorado.

See Sketch on next page.

## F. D. MORSE.

**M**R. F. D. MORSE was born near Princeton, New Jersey under the shadow of Old Nassau Hall, where he received his education. He studied law with Judge Bortine, of Somerset County, New Jersey. Subsequently he was admitted to the bar in 1871, in the State of Nebraska; afterwards he practiced law in the State of Kansas, and dealt largely in real estate.

In 1887 he removed to Denver, and entered into the real estate business and the practice of law. He soon became prominent in real estate circles, taking an active interest in the Real Estate Exchange, of which he was a member. The prominent part he took in debates upon the important subjects brought before that body soon marked him for promotion, and he was, at the second annual election of the Exchange, chosen one of the directors. In the revision of the by-laws of the Exchange, and subsequent incorporation, Mr. Morse was one of the most active workers, was one of the incorporators, and in the chartered body became a director. The present efficiency of the Exchange is largely due to the personal efforts of Mr. Morse.

The law business has been, up to this time, merely an auxiliary to Mr. Morse's realty transactions, but is growing to become the main feature of the business. His judgment of titles is highly regarded by several large loan and trust companies, who consult him frequently.

Mr. Morse is a natural politician, and figures very conspicuously in the various conventions of the city. Being a natural organizer, he usually succeeds in having things go his way, therefore the future public career of Mr. Morse is liable to be something to be proud of. With all public enterprises we find him prominently identified, and he is a liberal supporter of all movements which tend to increase the growth of Denver.





HENRY APPLE,  
Denver, Colo

See Sketch on next page.

## HENRY APPLE.

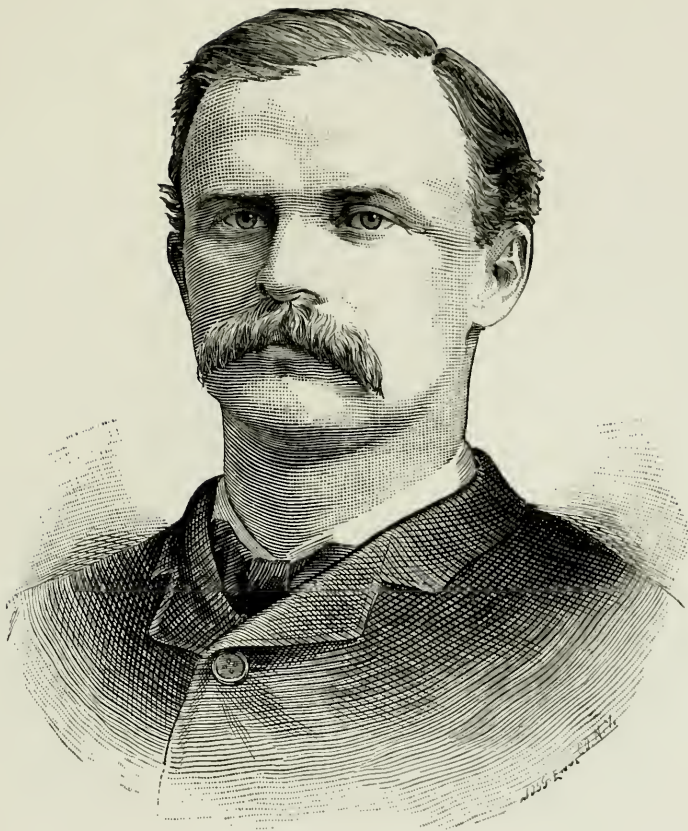
THE senior member of the firm of Apple & Hamilton, real estate dealers and brokers in loans, mines and insurance, was born in Cincinnati, Ohio, July 29th, 1838. In 1842 he removed with his parents to their old home and birthplace, Philadelphia, from whence they went to Pittsburg in 1844. Having lost their entire fortune in the great fire of 1845 in this city (Pittsburg), they soon after removed to Nashville, Tenn., when the subject of this sketch was placed in the best private schools of this city, there being no public schools in those days. While in school he made the best possible use of his advantages, and advanced rapidly.

In July, 1850, his father died of cholera, leaving the wife and mother in straitened circumstances, which compelled her in September, 1852, to place her son in a wholesale auction and commission dry goods and notion house, where she hoped he might earn a livelihood. In this business he made a marked success as a salesman, and in three years' time obtained a position with another leading firm of the same city, where, although the youngest salesman, he made the largest sales.

In 1861 he responded to his state's call in the Confederate service, but, fortunately, his company was mustered out at the end of six weeks' service. Until 1863 he employed himself as best he could in the city of Nashville, when he went to Cincinnati and took the position of bookkeeper in a large commission house, where he remained for one year, then embarking in the wholesale boot and shoe business, doing business on his own account for awhile, but, finally, with the firm of Pritchard, Alter & Co., building up a prosperous business. After this we find him in business again in Nashville, where his venture was unsatisfactory to himself; afterwards with the firm of Chatterton & Co., of New York City, and in the fall of 1876 back again in Nashville, in the commission business.

Owing to ill-health, in August, 1879, he came to Denver. The following month he entered into a copartnership with H. K. Bunch, an attorney from St. Louis, Mo., who retired from the firm in 1881, leaving Mr. Apple to control the business alone, until 1883, when he formed a copartnership with Mr. George A. Hamilton, under the style of Apple & Hamilton.

Mr. Apple is a director in the Real Estate Exchange and an active member of the Chamber of Commerce, being the foremost in advocating public improvements. Through his efforts the council have lately added two steamers to the equipments of the fire department. He was also a member of the Chamber of Commerce committee which reported upon the prospects of natural gas within a short distance of Denver, as well as on the Committee of Arrangements for the late Inter-State Deep Harbor Convention.



GOVERNOR W. G. SMITH,  
Lieutenant-Governor of Colorado.

See Sketch on next page.



## HON. WM. G. SMITH,

LIEUTENANT-GOVERNOR OF COLORADO.

MR. SMITH was born in Newton, New Jersey, in 1857. His family soon moved to Birmingham, Michigan, where he graduated from the High School. He came to Colorado in 1872 with his father, mother, brother and sister. Soon after reaching Colorado, his father died, leaving him, his mother, sister and younger brother to be supported by his own exertions. He engaged in various pursuits, but soon became an expert lather and plasterer, which afforded him sufficient income to support the family, and lay up a little for a rainy day. During the winter season he taught school, although not yet 17 years of age, having passed a creditable examination before the Denver school board.

He had saved up some money, and in November, 1874, he purchased the *Golden Globe*, a weekly newspaper published at Golden, in Jefferson County, and has been editor and proprietor of the same ever since. He served four years as Superintendent of Public Schools of Jefferson County; he served two years as private secretary of Gov. F. W. Pitkin; and for four years was a member of the Board of Trustees of the State Reform School. In the fall of 1888 he was elected Lieutenant-Governor of the state, and during the late session of the legislature, showed his great ability as a parliamentarian. During Gov. Cooper's absence from the state for nearly a month, Mr. Smith was acting as Governor, performing the duties of the first office in the state, to the entire satisfaction of Governor Cooper and the state in general, and with great credit to himself.

Governor Smith is in every sense of the word a self-made man, and has attained a place in politics rarely reached by a man of his years, he being only 31 years of age when elected.



O R. BURCHARD,  
Denver, Colorado.

See Sketch on next page.

## O. R. BURCHARD

**W**AS born in Binghampton, N. Y., in 1842; graduated at Yale College in the class of 1865, and was for twelve years professor of ancient languages in the State Normal College at Fredonia, N. Y. During this time he edited and published the *New York State Educational Journal*; was a contributor to the popular monthlies of the day, including *Scribner's*, now the *Century*. Seven years ago he came to Denver, where he at once engaged in the business of real estate broker, in which business he has continued up to the present time. Mr. Burchard has made a specialty of handling first class inside business property, and his transactions in this line of business are as large as those of any other broker. He probably has the finest line of improved business property of any dealer in the city; his sales of this kind of property last year amounted to a little over \$1,000,000. As agent for two prominent insurance companies, he also, during the past year, loaned on Denver property over \$600,000.

Mr. Burchard has built several blocks for Eastern capitalists on leased ground, taking an interest himself in such buildings and having charge of the property. These investments are very satisfactory, paying from 10 to 20 per cent. profit per year; he is also prepared to make investments for eastern people, guaranteeing them a profit of 8 per cent. per year, on condition that he shall have the management of the property. Such an arrangement is very often pleasing to non-resident investors, and can be made satisfactory to both parties.

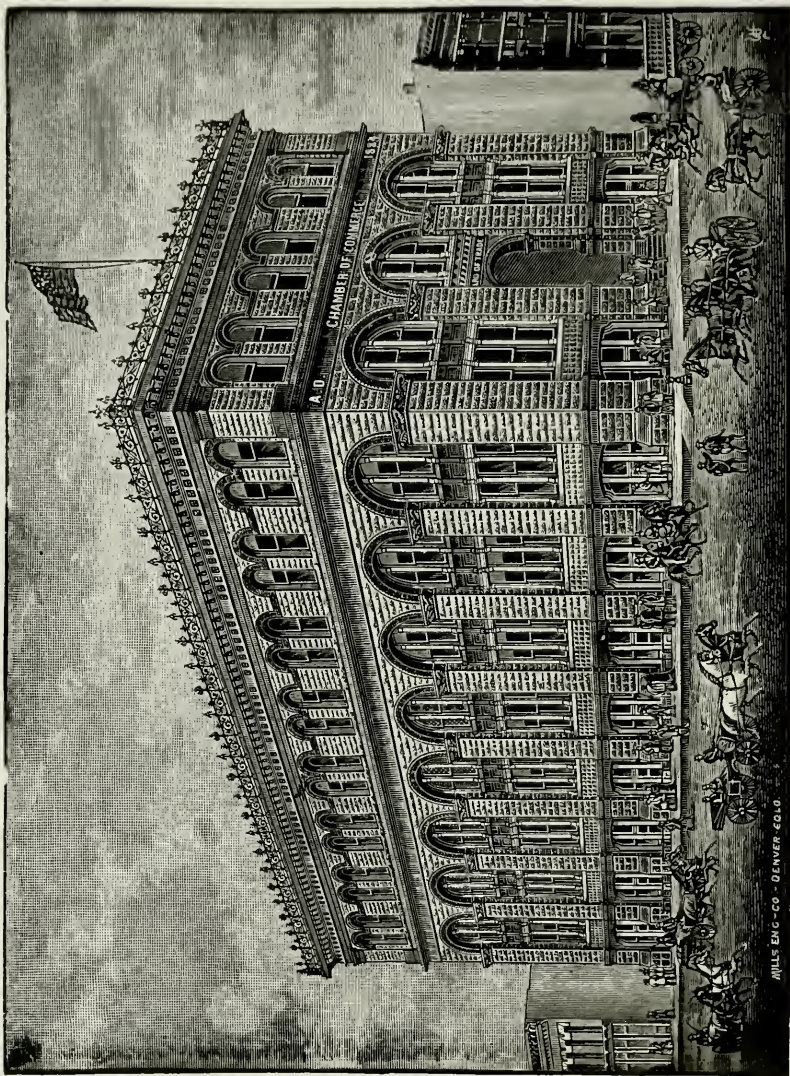
Mr. Burchard is largely interested in property in Denver and other places; he is considered one of the best judges of the value of Denver business property, and many men have made fortunes by purchasing on his judgment; he will be pleased to have strangers interested in Denver or Colorado; write him or call at his office, No. 1607 Curtis street, where he will cheerfully give such information about Denver as may be desired.





HON. H. B. CHAMBERLIN.

President of Denver Chamber of Commerce and Board of Trade,  
and Chamberlin Investment Company.



Denver Chamber of Commerce and Board of Trade.



## H. B. CHAMBERLIN

WAS born in Manchester, England; moved to New York State with his father's family when only seven years of age, where he resided until he was sixteen years old, when he entered the United States service, being appointed by General Thomas T. Eckert in the department of the military telegraph corps, where he rendered faithful service during the last two years of the war. At the close of the war he went into the drug business in Oswego, New York. In 1872 he opened a drug store in Syracuse, of the same state, where he conducted a very prosperous business. In 1878 he was chosen general secretary of the Brooklyn Y. M. C. A.

In 1880 he came to Denver, worn out and broken down in health, with no prospects for prolonged life. He did no business during his first year, living in the mountains, hunting and fishing, his highest aim being that of regaining his health and strength. In 1881 he embarked in the real estate and insurance business, with D. C. Packard, the firm being known as Chamberlin & Packard. In 1885 the firm was dissolved, Mr. Chamberlin taking the real estate business of the firm and Mr. Packard the insurance. In January, 1886, his brother, Alfred W. Chamberlin, became a member of the firm, and in January, 1889, a second brother, F. J. Chamberlin, was admitted. The business was then conducted under the style of H. B. Chamberlin & Bros., which was merged on May 1st, 1889, into the Chamberlin Investment Company, with H. B. Chamberlin as president, A. W. Chamberlin vice president, F. J. Chamberlin treasurer, and F. B. Gibson secretary. The paid-up capital of this company is \$1,000,000.

Mr. Chamberlin's first purchase of real estate in Denver was a twenty-acre tract, known as Central Capitol Hill, which cost him \$27,000, and is now worth, without improvements, at the very lowest estimate, \$300,000. His next venture, with others, was the Brown, Smith & Porter addition of twenty acres, costing \$20,000, the present value of which, without improvements, exceeds \$250,000. The next addition we find Mr. Chamberlin prominently identified with is the South Division of Capitol Hill, nearly 200 acres. This property was pre-empted by B. F. Woodward twenty-one years ago, he paying \$1.25 per acre for the same. In August, 1882, Mr. Woodward sold it to H. B. Chamberlin and associates for \$50,000, worth to-day, without improvements, at least \$500,000, the purchasers from H. B. Chamberlin often doubling their money in thirty to sixty days, blocks now being held by some of Denver's best and wealthiest citizens for



homes. Mr. Chamberlin is also a large owner of fine property in other Capitol Hill additions.

In 1887 he purchased the twenty-acre tract known as Capitol Heights addition, from William Barth and F. H. Dunlevy, for \$35,000, having refused to buy the same property less than one year before for \$5,500. The lots of this addition were placed on the market at from \$50 to \$400 each, and sold rapidly; are worth double and treble that amount now, and this addition is believed to be the most rapidly advanced property in the history of Denver.

Sixteen years ago Hon. J. Q. Charles pre-empted 160 acres of land east of the city, paying the Government \$240 therefor. In November, 1886, Mr. Charles sold it to H. B. Chamberlin and associates for \$100,000. It was platted and sold at prices ranging from \$175 to \$400 per lot, or at about \$300,000 for the entire tract, now worth about \$1,000,000, exclusive of improvements.

Capital Avenue Sub-division, second filing, comprising twenty acres, was purchased in November 1886, by H. B. Chamberlin and Milo A. Smith, of Ben Brewer, for \$15,000, which being platted, readily sold at \$150 per lot, or on a basis of \$30,000 for the entire tract, now worth \$100,000 at least, without improvements.

He is the largest owner in Colfax Terrace, a tract of 160 acres of land on Colfax Avenue, purchased in November, 1886, for \$32,000, from W. J. Boardman, of Cleveland, Ohio. This beautiful addition was placed on the market about two years ago, at \$75 to 160 per lot, since selling as high as \$300 per lot, generally selling in blocks. This property is now worth about \$400,000.

Mr. Chamberlin is also a large owner in Boston Heights, Colfax Heights, Sheridan Heights, Montclair Park Heights, Windsor, Capitol Heights, and other well known additions to Denver.

Besides Mr. Chamberlin's investments in Denver, he has large interests in Pueblo, Trinidad, Fort Worth, San Antonio, Corpus Christi and Aransas Pass. In Pueblo he is probably the largest owner of unimproved realty.

Mr. Chamberlin has faith in the future of Texas, being a firm believer in the early accomplishment of obtaining deep harbors on the coast of that state. His judgment in real estate matters has always proven good and his investments are regarded as sure pointers for would be investors. His great faith in speedily obtaining a deep harbor at Aransas Pass is characteristic of the man and worthy the consideration of the deep harbor workers.

Notwithstanding Mr. Chamberlin's activity in real estate, he has found time to enter largely into commercial enterprises. He is president of the Beaver Brook Water Company, which furnishes North Denver with water; vice president of Denver, Colorado Canon and Pacific Railroad, a new line from Denver to San Diego, California, via the celebrated Colorado canon, the most picturesque and grandest

canon in the world, and will be the popular tourist's route to the Pacific coast; vice president of the Keibler Stove Company, also of the Denver Insurance Company.

Mr. Chamberlain is president of the Young Men's Christian Association, and was recently elected president of the Denver Chamber of Commerce. Besides devoting much of his time to public enterprises, he is one of the most generous of men, deserving to be classed with the Coopers and Cornells. He recently gave \$40,000 towards the erection of the Trinity Methodist Church and parsonage, the finest Methodist church in the world, and is erecting an observatory, known as "the Chamberlin Observatory," for the Denver University, at a cost of \$50,000; it is at the greatest altitude of any observatory in the world. The Young Men's Christian Association of Denver is endeavoring to raise \$200,000 for the purpose of erecting a fine block for their use; Mr. Chamberlin came promptly forward with a \$25,000 subscription.

We are early in writing a sketch of Mr. Chamberlin's transactions and noble deeds in the West, and trust that this is only a prelude, as it were, to the many chapters that are yet to be added to the history of this man's career. He came quietly among us ten years ago a young man of thirty, and is yet on the sunny side of life, and we earnestly hope that he may be permitted to live among us for many years yet to come.

When Colonel Thomas Scott was asked what constituted the essential elements to a man's success, he is said to have replied, "He must possess the necessary equanimity of temperament to conceive an idea, the capacity to form it into tangible shape, the ingenuity to put it into practical operation, the ability to favorably impress others with its merits and the power of will that is necessary to force it into success." Are not all of these elements found in the subject of this sketch? Up to within the past few years we were not educated to believe that we could speak of the good qualities and noble deeds of a man before he had "shuffled off this mortal coil" without being thought a flatterer. We could not say that he has been an upright man, a benevolent citizen, etc.; but times have changed. We do not believe in tombstone eulogies. The time has arrived when we can speak of a man as he justly deserves to be spoken of, and in this small way make known to Mr. Chamberlin that we fully appreciate him and all that he is doing for us, and that we realize that our homes and surroundings are being made better and happier by his influence and benevolence in the great "Queen City of the West."

Mr. Chamberlin has proven to us by his deeds that he is a noble, generous man, and that while he is blessed with an abundance and is himself enjoying the full benefits of his wealth, he takes pleasure in making others happy, and finds it indeed blessed to give. He does not believe in waiting until after his death to let these noble and glo-

rious institutions have the benefit of his donations; but, in making these gifts now, he adds to his own pleasures by seeing these organizations enjoying his generosity. Mr. Chamberlin has certainly reached that age and degree of prosperity where an accumulation of wealth is desired only as a means of benefitting the public as well as himself.

Is there any wonder that such a man, combining the qualities of the best men of America, has made a success of life? especially as he has had the bracing atmosphere and grand inspiration of Colorado to aid him. There is much in the saying that "the climate makes the man." Colorado has plenty of climate to make 5,000,000 men and a sufficiency of health and industry to support them.

A. W. Chamberlin, vice president of the Chamberlin Investment Company, was born in Oswego, New York, in 1857; was educated at Oswego; was engaged in the drug business in New York and Chicago for sixteen years; came to Denver in 1882; was clerk in a drug store for three years, and in 1886 was admitted to a partnership with H. B. Chamberlin. Mr. A. W. Chamberlin has been identified with some of the largest real estate transactions in Denver, now all merged in the Chamberlin Investment Company.

Fred. J. Chamberlin, treasurer of the company, was born in Oswego, New York, in 1865; educated in the same city; came to Denver in 1882, and was engaged in the insurance department of Chamberlin & Packard until 1887, when he went to Los Angeles, California, where he remained in the real estate business until July 1st, 1888; he then returned to Denver and entered the firm of H. B. Chamberlin and Bros., January 1st, 1889.





Thomas Tongue, Stenographer.  
Denver, Colorado.



President Union Bank.

*A. M. Woodbury.*

## GENERAL R. W. WOODBURY,

PRESIDENT UNION BANK, DENVER.

GENERAL WOODBURY is a descendant of William Woodbury, who came from England to America in 1828, and settled at Beverly, Massachusetts.

R. W. Woodbury was born at Francestown, New Hampshire, March 3rd, 1841; in 1858 we find him at the case, setting type for the Manchester "Mirror." He enlisted in the 3rd New Hampshire Infantry July 27th, 1861, and served through the war, rising from the ranks to Captain, detailed as Chief of ordinance of the Tenth Army Corps upon the staff of General A. H. Terry.

After the close of the war, in the spring of 1866, he came to Colorado and began Western life as a compositor on the "Golden Transcript," and later in the same capacity on the "Denver Tribune," of which paper he soon became managing editor and part owner.

In 1871 he disposed of his interests in the *Tribune* and purchased the *Denver Times*, then a small daily. Under his management the paper grew to be a very important paper. He withdrew from Journalism in 1882, owing to threatened impaired health, resulting from too close application to his paper.

At the organization of the Denver Chamber of Commerce, composed of four hundred and fifty of the leading business men of the city. Mr. Woodbury was elected president, to which position he was twice afterwards unanimously elected. While president of the Chamber of Commerce, General Woodbury successfully planned and executed the construction of the handsome home of the Chamber of Commerce, at a cost of \$40,000., was prime mover in establishing manufacturers projected industrial expositions etc., and was instrumental in having established the Mercantile Public Library in connection with the Chamber, which contains about 20,000 volumes and more than 600 persons have availed themselves of its privileges in a single day.

In the fall of 1886, Mr. Woodbury became president of the Union Bank of Denver, which is to-day one of the strong financial institutions of this city, having a capital of \$100,000. Surplus May 1, \$100,000.

General Woodbury is always foremost in every enterprise which is undertaken for the advancement of the city.

The several industrial expositions which have been held in Denver, were largely due to the general personal efforts of Mr. Woodbury, whose individuality is stamped firmly upon the records of their success.



## THEO. W. HERR &amp; CO.

**A**MONG the enterprising and reliable promoters of the City of Denver, the firm of Theo. W. Herr & Co. deserves honorable mention. This firm is composed of Theo. W. Herr and H. C. Donnell, originally established in 1873 by Mr. Herr. Mr. Donnell was admitted to the firm about one year ago. They do a general real estate business and deal extensively in mining properties. In addition to their real estate and mining business, they have lately secured control of a reservoir and ditch company designed to furnish the city of Denver with an abundance of pure mountain water. They have secured a charter from the state, and the work is in progress, which will be completed in time to connect with the city when the present water works company's contract with the city shall have expired (May, 1891). The reservoir sites secured by this company are the only available sites within reaching distance of Denver; combined they have a storage capacity that, once filled, would be sufficient water to supply a city of 500,000 people, which population Denver will reach in about the year 1900.

Theo. W. Herr was born in Lancaster County, Penn., in 1833; educated at the Strawsbury Academy and Millersville, Penn., Normal school. Taught school about four years. Was Deputy County Treasurer of Lancaster County two years; Clerk of the Court of Quarter Sessions of same county three years; Deputy Provost Marshal of same county during the war. Studied law with the Hon. John B. Livingston, present Judge of the courts of that county; admitted to practice in the year 1870.

Mr. Herr came to Denver in 1873 and entered the real estate business with John Clough & Co., afterwards Herr, Barna & Pace. In 1876 this firm was changed into the firm of Theo. W. Herr & Co., (Co. nominal) and has retained the title since.

From 1876 to 1878 he was engaged in mining in Custer county, at Roseta, as manager, and took from the famous Pochahontus mine over \$200,000 in two years.

Since 1878 he has devoted all his time to Real Estate. H. C. Donnell was admitted into the firm in February 1888.

H. C. Donnell was born in Bond county, Illinois, near the Vandalia railroad, in 1840; educated at Hanover College, Hanover, Ind., from which place he graduated in 1863.

John W. Scott, D. D., father-in-law of President Harrison, was Mr. Donnell's professor of Natural Science at Hanover.

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EX-GOVERNOR OF COLORADO.  
Treasurer Inter-State Deep Harbor Committee.

*Alva Adams*



Mr. Donnell taught for eight years, during which time he was professor of Natural Science in the Illinois State University, at Springfield, Ill., of which Dr. Scott was president.

He came to Colorado in 1872, and has been mining in all of the successful mining camps of the State. About one year ago he came to this city and was admitted into the firm of Theo. W. Herr & Co., while doing business in Denver.

He continues to live at Poncha Springs in Chaffee Co., where he owns an extensive ranch, and very handsome and valuable residence, which cost him about \$12,000 to build.

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### HON. ALVA ADAMS,

EX-GOVERNOR OF COLORADO—TREASURER INTER-STATE DEEP HARBOR  
COMMITTEE.

**G**OVERNOR ADAMS was born in Iowa County, Wisconsin, May 14th, 1850. His parents were pioneers in the lead mining district of Wisconsin; he was educated at the common schools of that state, which are noted for their thoroughness and high standard; he came to Colorado in the spring of 1871, and was engaged in hauling ties on the first section of the Denver & Rio Grande Railway. While working for C. W. Sanborn he erected, in August, 1871, the first house in Colorado Springs. Later he bought out the lumber business of Mr. Sanborn, and soon changed it into the hardware business, which has been his business since. The business has grown under his able management to be the most extensive in that line west of Chicago; principal house at Pueblo. Branches in which the Governor is interested are located at Alamosa, Durango, Silverton, Ouray, Telluride and Gunnison.

In the person of Governor Alva Adams we have a noble representative of true American citizenship, and a splendid illustration of the superiority of a Republican form of government. His private and public career in Colorado is a striking instance of the opportunities which are open to all men, of however humble station, to rise to the proudest position in the land.

He was elected a member of the first State Legislature of Colorado from Rio Grande County; he is a Democrat of the Jeffersonian type, and, in his official positions, has adhered strictly to his principles. In 1884 he reluctantly accepted the Democratic nomination for Governor, and, while he was defeated, he made a splendid record, having polled 6,000 votes ahead of the ticket. Again, in 1886, he was persuaded to accept the nomination, and his election, in the face of the state being Republican, by an overwhelming majority is a deserved compliment to honesty, integrity and personal popularity.

Governor Adams married in 1872 a charming lady, who has been one of the main elements of strength which has marked the social and political success of the Governor. Socially Governor Adams is a man of cordial nature and genial disposition, and, among people of all stations of life, he is the same candid, unpretentious, kind and courteous gentleman. That he made an excellent Governor is acknowledged by all parties, and his public acts meet the general approval of the people. At present he occupies the position of treasurer of the Inter-State Deep Harbor Committee, of which he is a member. The movement will be a success, owing mainly to the prominence of the individuals composing the permanent committee.

### HON. JOHN EVANS,

PRESIDENT INTER-STATE DEEP HARBOR COMMITTEE.

**EX-GOVERNOR JOHN EVANS**, was born in Warren county, Ohio, March 9th, 1814. Graduated from the Medical department of the Cincinnati College in 1838. For a time he was professor in Rush Medical College of Chicago. He was one of the projectors of the Fort Wayne & Chicago railway. In 1852-53 he was a member of the city council of Chicago, Ill.

Evanston, Illinois, was named in honor of Gov. Evans, and there is situated the largest Methodist institution of learning within the United States. Gov. Evans was its most munificent friend. He endowed two chairs.—Mental and Moral Philosophy, and Latin, with \$50,000 each, and has been president of its board of trustees since its organization in 1852. He was a member of the Illinois State Convention which first nominated Abraham Lincoln, as President of the United States. Governor Evans was appointed by his personal friend, President Lincoln, to the Governorship of Colorado Territory.

In 1865 Congress passed an act admitting Colorado as a State, and again in 1866, President Johnson vetoed both measures; Colorado, however, had in 1865, prepared for statehood, and the Legislature elected Governor Evans to the United States Senate. He spent both winters, 1865-66 and 1866-67, in Washington as senator elect, but not in fact. Governor Evans was one of the first advocates of freeing the slaves and enlisting them in the army at the outset of the war of the rebellion. He contributed many articles to the *Chicago Evening Journal* upon the subject.

He became a member of the Methodist Episcopal Church in 1843, and has since been an honored member of that denomination. In 1863 he originated the plans for the Colorado Seminary (now the University of Denver), chartered by the state in that year, the same bearing the signature of the Governor. This institution is one of the



HON. JOHN EVANS,  
Denver, Colo.

War Governor of Colorado; President of the Inter-State Deep Harbor Committee  
and President of the Denver, Texas and Fort Worth Railway.

(Note—Steel Plate of Gov. Evans will appear in subsequent editions.)





President Strayer Investment Company and Park Railway Co.

*J. M. Strayer*

most promising in the West, receiving much of the Governor's time and surplus means.

Upon coming to Denver he became a member of the board of trustees of the First M. E. Church (Lawrence Street Church), which was the spiritual mother of the several prosperous Methodist societies of Denver, notably the Trinity Church and the Grace Church, the latter receiving from Governor Evans a most generous support.

Evans Memorial Chapel was erected by him to the memory of his daughter Josephine, who, at her death, was the wife of Hon. Samuel H. Elbert, since Governor and Chief Justice of Colorado. The Governor has aided materially in the erection of every Methodist church in Denver, and contributed to their support; in addition, he has been a liberal giver to almost every other church denomination of Denver.

Probably the greatest good Governor Evans did for Denver commercially, was the institution and completion of the Denver, Texas & Fort Worth railway, giving Denver direct connection with the Gulf. The next in importance was the building of the Denver & South Park narrow gauge railway, and lastly the numerous fine business blocks he has erected, the last being the Railroad building, an eight story stone and brick structure.

Governor Evans is president of the permanent Inter-State Deep Harbor Committee, and a staunch friend to the movement for deep harbors on the Texas Gulf Coast.

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## J. W. STRAYER & CO.,

REAL ESTATE AND INVESTMENT BANKERS.

**J**OHN W. STRAYER can boast of a noble and honorable Virginia ancestry; his parents, George W. and Sarah A. Strayer, are natives of the Old Dominion. Mr. Strayer was born at the village of Hedgeville, Berkley County, in what is now West Virginia, January 9th, 1846. When he was quite young his parents removed to the state of Ohio, and here he grew to manhood; he acquired his education in the public schools of Logan County and Bellefontaine, Ohio. For five years after leaving school he was employed in teaching at Degraffe, Ohio. In the spring of 1869, a year after his first marriage, he removed to Carrollton, Mo., where he engaged in general merchandising for nearly nine years. In this business he was quite successful, and removed to Kansas City in 1878 in the interest of the Jackson Mining Company, of which company he was vice president and general manager. But still retaining his liking for his old vocation, that of merchandising, he opened a stove and tinware store, which was merged into a general hardware store and grew to be one of the prin-

cial stores of its kind of the city, and was carried on quite successfully by Mr. Strayer. After this Mr. Strayer became an extensive dealer in real estate and broker, and was senior member of the firm of Strayer & Co., one of the best known firms of the city, he having also made a specialty of organizing and managing business syndicates and associations.

Mr. Strayer has been very prominent in the organization and management of leading enterprises, many of which have been very important and useful; he was one of the prime movers in the organization of the Kansas City and Olathe Investment and Rapid Transit Company, having a capital of \$1,000,000, he being chosen its vice president and general manager; he was one of the promoters, as well as president of the South Park Town Company, which had a capital of \$200,000. Mr. Strayer's greatest prominence, perhaps, in connection with public enterprises was as vice president and general manager of the Kansas City and Philadelphia Land and Improvement Company, which corporation had a capital of \$1,000,000, and did much for the general welfare of that city. This company purchased 3,000 or 4,000 acres of suburban lands to the southwest of the city, most of which lay near Lenexa, Kansas, whereon it established extensive and valuable improvements. That delightful tract known as Lincoln Park, which is visited and admired by all of Kansas City's visitors, and the beautiful artificial basin called Silver Lake, both constructed by this company, have become very popular resorts.

Mr. Strayer came from Kansas City to Denver, on account of the extreme ill-health of his wife, about one year ago and engaged in the real estate business, under the firm name of J. W. Strayer & Co. This firm is one of the largest and most successful operators in Denver realty. Mr. Strayer took lessons in Kansas City for about ten years, and was therefore well supplied with the two essential requisites, nerve and experience, when he began his operations in this city, which have, and are still, giving him such great success.

J. W. Strayer & Co. are handling tracts of suburban and city property the value and character of which is fully \$1,000,000. Mr. Strayer has disposition of the property known as Park Hill, Strayer's Park Place, Park Hill annex, Strayer and Shepard's Park Hill and the 320 acres known as the property of "The Strayer Investment Co.," and a rapid transit line, known as the Park Railway Company, incorporated last September, with \$75,000 capital, and built from the southwest corner of City Park to the Woman's Baptist College, thence through the center of the property of the Strayer Improvement Company and directly through centers of Strayer & Shepard's Park Hill and Park Hill Annex, connecting with cable on north side of City Park. It makes cable connection on both sides the park, and will make about ten miles of well built and elegantly equipped line of this company, with a 5 cent fare from Union Depot through the heart of



the city, and runs every thirty minutes. Mr. Strayer is president of the company and its general manager. Since this has been done 200 families have been located on the lands and as many brick cottages have been already contracted for. The location of these lands is at 250 feet elevation, and the park, the city and the Rockies are in full view from any part of them.

The Strayer Investment Company own altogether 480 acres, and have platted 160 of them in blocks and half blocks. The remaining 320 acres will be sold in 40-acre tracts. Mr. Strayer is general agent for the company; he believes that from 300 to 500 per cent. can be made on cash investments here in a single year, but makes a somewhat more conservative proposition to strangers of an absolute guarantee of 8 per cent. and half of all the net proceeds of sale for every investment they make here. He is providing loans and is getting for the use of money, 7 to 9 per cent.

The following gentlemen are associated with him in the Strayer Investment Company: J. G. Benkleman, vice president; J. B. Shepard, secretary; E. R. Barton, treasurer; Z. W. More, A. L. Doud and J. B. Vroom. Three of these—Messrs. Benkleman, Shepard and Barton—have close relation with banks here. Mr. J. W. Strayer is president of this company also. The office of Mr. Strayer and this company is at room 2, Patterson & Thomas block, northwest corner of Seventeenth and Curtis streets.

Mr. Strayer organized his firm and the companies above referred to last fall and has done over two million (\$2,000,000) dollars worth of business within that time, eight months. This satisfies him about as well as his Kansas City business did, and he is therefore very enthusiastic over Denver's outlook and great promise for the future.

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### I. B. PORTER.

**I.** B. PORTER, senior member of the firm of Porter, Raymond & Co., was born in Monroe County, Missouri, in 1842, and was educated there for the law. He, however, entered the banking business in Missouri, where he remained until 1875, when he removed to Montana, and practiced law there for eight years. He came to Denver in 1884 and organized the Real Estate and Insurance firm of Porter Raymond & Co.

The first large transaction in real estate attempted by this firm was the purchase of 160 acres of land adjoining Capitol Hill, which they platted and placed on the market under the name of Wyman's addition; the same has been all closed out at a profit of \$500,000 to the firm. They now own Rohlfsing addition, adjoining Wyman's (now nearly all sold), and Platte Park addition, which lies just North of the river on West Colfax Avenue. They are firm believers in Colfax

avenue property, whether in East or North Denver. Mr. I. B. Porter, Mr. W. W. Porter and Mr. Chas. A. Raymond compose the partnership. They each own a fine residence in Wyman's addition, ranging in cost from \$15,000 to \$20,000 each.

Mr. I. B. Porter is a public spirited man and is usually found upon the important public committees, not infrequently at the head. The greatest good Denver ever derived from any public committee work, was probably that accomplished by the Committee of Arrangements for the Inter-State Deep Harbor Convention (see appendix for particulars of convention). Mr. Porter was chairman of that committee of arrangements, and worked faithfully to secure its perfect success. That it was a success we need only refer you to that eminent authority on Denver, John E. Leet, whose article on real estate we publish entire and appears a few pages in advance of this. Mr. Leet says: that convention was worth \$10,000,000 to Denver. We believe it; and believe that much of the success of the movement was due to the personal efforts and ingenuity of Mr. Porter. (The author of this book was secretary of that committee of arrangements and knows whereof he speaks.)

I. B. Porter was a candidate for State Senator in the 1888 election on the democratic ticket, and although defeated he received many more votes than any other democratic candidate; an evidence of his personal popularity. He is a liberal contributor to all public enterprises, and has been one of the foremost promoters of the extensive cable system that Denver now enjoys.

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### COLONEL ARCHIE C. FISK.

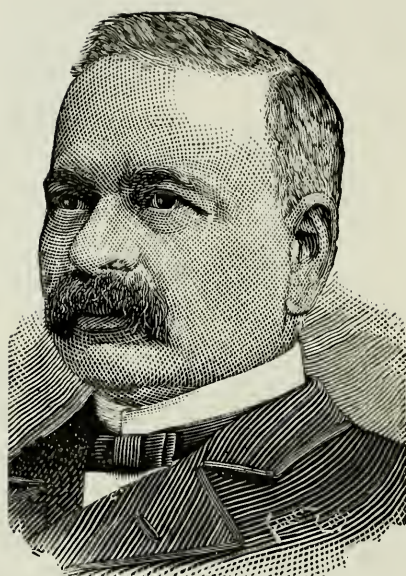
**M**R. FISK was born in New York City in Oct., 1836. After leaving school he was engaged as clerk in a store in Elyria, O., until Lincoln's call for troops, when he assisted in raising a company, which was mustered in the 23rd Ohio Infantry. He was commissioned lieutenant June 1st, 1861, and assigned to the staff of Gen. W. S. Rosecrans; early in 1862 was appointed Assistant Commissary of Subsistence for the District of Kanowa; participated in the battles of West Virginia, also second Bull Run, South Mountain and Antietam. In December, 1862, was assigned to the staff of Gen. Hugh Ewing and joined Gen. W. T. Sherman's command January, 1863; was appointed Assistant Adjutant General and assigned to duty with Gen. J. A. J. Lightburn; participated in the operations around Vicksburg, and rendered efficient and conspicuous services during the assaults and siege; was with General Sherman on the Jackson campaign, also at Collierville and through Alabama; was Assistant Adjutant General 2nd Division 15th Corps at the battle of Mission Ridge and the march



COL. ARCHIE C. FISK,

Member of the Committee of Arrangements for the Inter-State Deep  
Harbor Convention, held in Denver August, 1888.





HON. WOLFE LONDONER,  
Mayor of Denver.

Mr. Londoner is Chairman of the Republican State Central Committee, has resided in Colorado for many years, was one of the earliest pioneers. Wolfe Londoner has the largest wholesale and retail grocery establishment in the city, his trade mark is "Let 'er go Gallagher."

to Knoxville, remaining with this command until after the fall of Atlanta, and, as Adjutant General of this division, served on the staffs of Generals Ewing, Lightburn, M. L. Smith and W. B. Hazen. In October, 1864, was assigned to duty as Adjutant General District of Vicksburg, which position he held until after the close of the war. In addition to his duties as Adjutant General of that department, he was in February, 1864, appointed Commissioner for the Exchange of Prisoners of War, and succeeded in releasing from rebel prisons at Andersonville, Ga., and Cohoba, Ala., about 8,000 captives. These prisoners were taken to the rear of Vicksburg to "Camp Fisk," which was named in his honor. At the surrender he signed the paroles and furnished transportation to their homes for about 75,000 Confederate soldiers from the armies of Generals Dick Taylor, N. B. Forrest and Wirt Adams.

After the close of the war he engaged in mercantile and manufacturing pursuits in Vicksburg, constructing and operating the first cotton seed oil mill in that section. During the reconstruction he took part in politics and published the *Republican* and afterwards the *Daily Times*; was a delegate from the state at large to the National Convention that nominated Grant in 1868; was appointed member of the National Executive Committee for the ensuing four years; was Chairman of the State Committee in 1869; was also a candidate for Congress in the Vicksburg District for that year.

In 1873 he removed to Denver with his family, where he has since resided. During the year 1878, '79, and '80, he was clerk of the District Court. During his entire residence in Denver he has been one of the leading real estate operators; in fact he has probably platted more additions, laid out more streets, and planted more trees than any other citizen Denver has ever had. He has organized several large Companies for operating in real estate and building up the city. Among them The Denver Land and Improvement Co., the Circle Railroad and Real Estate Companies, and The American Trust Co. He first conceived the idea of building cheap homes for the working classes allowing them to pay for them at \$15 per month, accomplishing a double purpose, that of making them tax payers and feeling an interest in the welfare of the city, and enabling them to work at moderate wages, which made it possible for manufacturers to engage in business and to this fact Denver owes much of her prosperity. Col. Fisk has certainly left his impress upon the City which he has seen grow from a mere village. He is one of the most active members of the Real Estate Exchange, and Chamber of Commerce, is ever alive to every enterprise looking to the advancement of Denver. In doing so much for Denver he has not been entirely unmindful of his own interests. He is to-day one of the largest real estate owners in Colorado, owning additions to Denver, inside business property, town property,

farms, horse and cattle ranches in various portions of the State, is also engaged in mining.

Mr. Fisk is always found prominently identified with every public enterprise, his name appears on all of the prominent committees of the Real Estate Exchange and Chamber of Commerce.

In his home life is where Col. Fisk shows forth to the best advantage. His recently completed residence is one of the finest, if not the finest private residence in Denver, it is complete in all of its apportionments and presided over by Mrs. A. C. Fisk, one of Denver's most charming ladies, a hostess of rare ability and very entertaining.

Col. Fisk has one of the most extensive private libraries in Denver, which he frequently consults, being a studious man of fine literary talents.

Col. Fisk is a typical Coloradoan and is numbered among her wealthiest and most sagacious business men.



## THE DENVER CHAMBER OF COMMERCE.

THIS magnificent commercial institution was organized in 1883, mainly through the efforts of General R. W. Woodbury, with a membership of 450 of the leading business men of Denver. Gen. Woodbury was the first president, and was twice re-elected to the position by a unanimous vote. To Mr. Woodbury the Chamber is mainly indebted for the large public library in connection with that institution. The library now contains upwards of 20,000 volumes of well selected books, which are consulted daily by an average of more than 600 persons.

The Chamber of Commerce was organized for the purpose of promoting the general commerce of Denver, and how magnificently it has succeeded in its mission one needs only to consult the successive reports of that body from year to year since its organization. The increase in business has kept pace with the marvelous growth in population, and to-day Denver stands almost without a rival as a commercial city west of Chicago, and in population will rank next to Chicago ere the close of the present century, Denver's population at this writing, May 15th, being at least 135,000, having gained in four months at least 10,000 inhabitants, the present rate of increase being nearly 3,000 souls per month. We refer our readers to the following by the publishers of the Denver City Directory:

## SEVENTEENTH ANNUAL DIRECTORY OF THE CITY OF DENVER.

The work herewith presented for public inspection and approval shows the most rapid and substantial growth during 1888 that our city has ever experienced in one year. There is in this volume 43,567 names, showing the remarkable increase of 10,008, or nearly one third more names than its predecessor, which by the most conservative method of estimating our population gives us 125,481 inhabitants.

The present officers of the Chamber of Commerce are as follows: H. B. Chamberlin, president; W. J. Barker, first vice president; John Arkins, second vice president; Chas. H. Reynolds, secretary; William D. Todd, treasurer; with an efficient Board of Directors, composed of thirteen members. In connection with the Chamber of Commerce, it is well to state that they publish annually, March 1st, a report which contains a review of the previous year's business. While the report is a good criterion of business progress, it is, however, far too conservative in many things, especially that portion referring to the number of houses doing business in the city. Their last report only includes 1,097 mercantile and manufacturing houses in Denver, whereas

"Dun's" Mercantile Agency, reports 3045, and "Bradstreet's" Commercial Agency reports 3030 business concerns in Denver, and report that the gain of new establishments averages nearly 100 per month. Neither Dun's nor Bradstreet's reports include real estate dealers or others likely to change suddenly, only permanent institutions being included.

General Frank Hall, Secretary of the Chamber of Commerce, from its inception until the present year, resigned his position to complete his history of Colorado, which is coming out in four volumes of 600 pages each. General Hall's History will be the most complete of its kind ever published, and will be used as a reference book for future historians.

General Frank Hall figured prominently in the early history of Colorado, was one of the pioneer newspaper editors, and when the war broke out organized a military regiment for the then territory, and did valiant home service for the territory, in defence of the Union.

The Real Estate Exchange has been a valuable auxiliary to the Chamber of Commerce. It was organized by F. L. Dana, June 24th, 1887, at the Chamber of Commerce hall, where Mr. Dana gave a banquet to over one hundred of the leading real estate men of Denver, who had signed to become charter members of the proposed Exchange. An organization was effected, and by Mr. Dana conducted for more than a year, when it became an incorporated body. The Exchange has succeeded in systematizing the real estate business and elevating it to a place along with the best commercial lines in Denver. Elsewhere we give a list of the members of the Exchange, which will prove a valuable reference to would be investors in Denver realty, certain qualifications being necessary to admit a person to a membership and is somewhat of a guarantee of good faith.

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## CITY GOVERNMENT.

THE city government is divided into divisions—the executive (Mayor Wolfe Londoner) and legislative (two houses, Board of Aldermen and Council), beside which there are City Engineer, Auditor, Treasurer, Health Commissioner, Fire and Police departments, Street Commissioner, Building Inspector and Police Magistrate, the latter appointed by the Governor. The Police department employs 100 men and the paid Fire department 59 men. The bonded debt of the city is only \$400,000, while the assessed valuation (one-third actual value) is nearly \$50,000,000. The actual value of all property in Denver is reliably estimated to be \$165,000,000. The city voted to issue \$700,000 more bonds, at a recent election, to be used in street improvements, which is at the disposal of a Board of Public Works, authorized by the late Legislature, composed of five citizens of the

city, appointed by the Governor. The tax levy for city purposes is limited to 10 mills on the dollar, which is ample to meet all expenses of the city government and provide a handsome sum per annum for a sinking fund for bond redemption.

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## DENVER'S JOURNALS.

From the Postmaster in Denver we receive the following report regarding the number of papers entered at the Denver Post Office as second class matter:

Daily papers 4, semi-weekly 1, weekly 29, semi-monthly 1, and monthly 21; a total of 56. The late report of the Denver Chamber of Commerce gives only 9 papers published in Denver, which is unfair to our fair city's fame and runs conservatism to a dangerous extreme. The new Secretary of the Chamber of Commerce appears to be ambitious to out do in conservatism, his predecessor whose only fault appeared to be that he was extremely conservative, his report for the year 1887 stating that there were 15 newspapers published in Denver, when at that time there were 41. We regard our authority, for stating that there are 56 newspapers published in Denver, superior to any Chamber of Commerce authority; we stand by the Postal authorities' count. Almost as soon as gold was discovered in Colorado did the enterprising Journalist, Wm. N. Byers, then a resident of Omaha, conceive the idea of starting a newspaper in Denver. A short history of his trials and tribulations in the establishment of the *Rocky Mountain News* will prove interesting.

### HISTORY OF THE ROCKY MOUNTAIN NEWS.

It was during the autumn and early winter of 1858, that a number of explorers and plainsmen wandered back to the Missouri river with reports of the discovery of gold in the sands of Cherry Creek. They brought "dust" with them in small quantities, mostly carried in goose quills. The report of these discoveries spread like wild fire along the entire Missouri river, and extended eastward through the then Western border states. They became, of course, more or less exaggerated as they were circulated, until the wildest rumors prevailed as to the extent and richness of the discoveries. Those communities were at that time suffering from the effects of the commercial crisis of 1856-57, and no small amount of financial distress prevailed, especially among the inhabitants of the then small towns which were growing up along the banks of the Missouri. To retrieve wealth and fortune in the newly found Eldorado became at once the determination of the people of that locality. Plans were discussed during the winter, prep-



arations made, and "Pike's Peak or bust" became the motto of thousands of enthusiastic and adventurous frontiersmen.

It was during this winter of 1858-59 that Mr. William N. Byers, then a resident of Omaha, conceived the idea of purchasing a printing press and material and establishing a paper in the new mining community. His associates in the proposed enterprise were Dr. George C. Monell, also of Omaha, and Thomas Gibson, of Fontanelle, Neb. A printing outfit, such as was deemed fitted for the enterprise, was found at Bellevue, Neb., and purchased.

The spring of 1859 came, and with it began the grand exodus from the valley to the mountains across the treeless, trackless plains. People by hundreds and by thousands were moving westward—all bent on individual gain, dreaming of future fortune; but little realizing that, like the heroes of ancient story, they were to become the founders of a great, powerful and influential State. With them came the future "Rocky Mountain News." Loaded upon wagons, drawn by oxen, the office material left Omaha on the eighth day of March, 1859. The party accompanying it numbered fourteen; among whom were two of the proprietors, William N. Byers and Thomas Gibson; Robert L. Sumner, now a resident of Minnesota; Edward C. Sumner, now deceased, who was once postmaster of Denver; P. W. Case and I Sanson, both of whom were killed during the war; John L. Dailey, subsequently one of the proprietors and now an honored resident of Denver; L. A. and W. J. Curtice, both well known and respected citizens of Denver; James and Harry Creighton and H. E. Turner; "Pap" Hoyt and Harry Gibson, a son of Thomas Gibson, and until recently one of the proprietors of the *Omaha Republican*.

Leaving Omaha, the wagon carrying the press mired in the mud in one of the main streets of the town, and had to be partially unloaded and dug out before the train could proceed. Only eight miles were made the first day. On the third day out, crossing the Elkhorn River, the ice broke, and the train was obliged to travel some two miles in water from one to four feet deep. "The streams were all flooded," writes Mr. Byers, "the mud bottomless, snow and rain storms frequent, and it was the last day of March when the caravan reached Fort Kearney, 185 miles from Omaha."

At this point it was learned that another printing outfit from St. Joseph had passed but a few days before, bound for the new mines, which information naturally increased the desire of "The News' train to hasten on; the roads were better, the weather improved, and faster progress was made. Arriving at old Fort St. Vrain, Mr. Byers left the train and rode on horseback in advance to Denver, reaching here on the 17th day of April, 1859. It was the day after the "great stampede" had set in, which carried at least four-fifths of those who had at that time crossed the plains back to their eastern homes. The thousands who had rushed to the new discoveries, disgusted at not

finding gold in the quantities reported, illy prepared to face the danger, the exposure, the hardships of frontier life, sick, hungry, suffering and disheartened, in one mad and disappointed crowd, almost a mob, turned their backs upon the mountains and took up their weary homeward march.

It was a veritable panic, and Colorado's star of destiny, yet unrecognized above the fitful, clouded horizon of states, appeared doomed never to rise from the gloom which seemed to shroud its gleams. "The News," conceived, but yet unborn, had thus early reached a crisis in its fate. The event was ominous; the "stampede" was not the first vicissitude which "The News" was destined to encounter and overcome. To stay or not to stay; to retreat with the disgusted and panic-stricken crowd, or to remain with those who had come to remain, and who were still undismayed at the present, or undaunted at what the future might develop—such was the first question which William N. Byers was called upon to determine, as, tired and fatigued, he dismounted and gazed at the motley collection of tents, cabins and shanties which then constituted the city of Denver. It was here that the sturdy qualities and determined purposes of the man were at once displayed. To return without even an attempt to give a newspaper to the newly settled town would belie every instinct of the pioneer and the journalist. "The News" train was promptly ordered forward; and on the 20th day of April, 1859, it rolled into Denver and rested upon the western bank of Cherry Creek.

The St. Joseph printing office had already arrived. It was in charge of Jack Merrick, a bold, whole-souled fellow, who had not yet unpacked it, but had employed his time in getting acquainted with "the boys about town." When "The News" began to unload their material, Merrick also began to unpack, and a spirited contest at once ensued as to which party should issue the first paper. The public became interested, bets were made by the partisans of each, and self-appointed committees, in turn, watched the progress of each office and reported the result. Both papers appeared on the afternoon of April 22, 1859, although "The News" bore date April 23, 1859. "The Rocky Mountain News" was the first issue, having printed its first sheet just twenty minutes ahead of the other paper, which was called the *Cherry Creek Pioneer*. It was the first and last issue of the *Pioneer*, its proprietor selling out to "The News" and starting for the mines, just then discovered in Gregory gulch, now Gilpin County. The first issue of "The News" was a six-column folio sheet, printed on 22x31 paper, and was, Mr. Byers says, "continued with tolerable regularity during the summer. Only one or two regular issues were missed, although some may have been printed on half-sheets and on wrapping or brown paper."

When "The News" was first issued the nearest United States Post Office was at Fort Laramie, 220 miles North of Denver. The mails

arrived there but once or twice a month. There was no telegraph line nearer than the Missouri River, and to receive information from "the States" was next to an impossibility. About the first of May a messenger was induced to make the trip to Fort Laramie, who, after hardships and sufferings, returned with a mule load of letters and papers. Thus "The News" obtained its first "exchanges." Cut off entirely, as it were, from the outside world.

In July, 1859, Mr. Byers purchased the interest of Dr. Monell, who had remained a silent partner and never came to Denver. Mr. John L. Dailey purchased the interest of Thomas Gibson, and the firm publishing "The News" became Byers & Dailey, which partnership remained during the entire early struggles of the paper, and was not dissolved until 1870, when Mr. Byers purchased Mr. Dailey's interest, and became its sole proprietor.

"The News" was first issued in daily form on the eighteenth day of August, 1860. It received its first telegrams November 13, 1860, by special messenger from Fort Kearney, to which post the overland telegraph line had been completed. Not many months after the line reached Denver, and a daily news report was thus obtained. As the line was extending west, however, the daily report was forwarded by coach or by pony express until its final completion.

To edit and publish a newspaper during those early days was a task not only difficult but dangerous. The community was divided into two classes broadly distinguished—those who were in favor of law and order and the proper observance of social obligations, and, on the other hand, those who were opposed to anything of the kind; lawless characters, gathered from every quarter of the country, who, freed from all legal or social restraint, felt themselves free to commit any excess or any crime, no matter how desperate or revolting. Upon this class of persons "The News," voicing the sentiment of the reputable and decent class of the community, made prompt and vigorous warfare.

"The New" was destined to encounter other and more serious difficulties. The great fire of April, 1863, swept away the heart of the town, destroyed seventy buildings and entailed a loss of \$250,000. It was a serious blow to the young city, and at once deprived "The News" of no small share of its patronage. It met this business reverse, as it had met all other difficulties, with coolness and courage, and it was owing not a little to its words of encouragement and cheer that the work of rebuilding the city was so promptly begun and so successfully carried out.

But another disaster, the most momentous and severe in its eventful history, was in store for "The News." On the night of May 20, 1864—a day ever memorable in Denver's history—a great flood came down Cherry Creek, and in a few moments swept away that portion of the town which lay in its course. To recount the dismay, the destruc-



tion to life and property, the utter ruin wrought by the rushing volume of water, is not within the purpose or limits of this article. It is sufficient to say that "The News" office was wholly swept away, and its contents completely scattered and destroyed. Its ponderous iron press lay buried in the sands nearly a mile down the stream, and was eventually recovered. But its type, ink, paper, books—everything that goes to make up the paraphernalia of a complete printing office—was gone, lost in the seething sand and water which in one awful minute had engulfed them all. The work of years was destroyed. Should it be re-created? Here, again, pluck, determination, resolution came to the rescue. The pioneer spirit was unconquerable, and speedily rose triumphant over disaster and ruin. As soon as financial arrangements could be completed, Messrs. Byers and Dailey purchased the old "Commonwealth" office, and, after a suspension of only a short time, on the 27th day of June, 1864, resumed the publication of "The Rocky Mountain News." New material and improved facilities were added, and once more the paper began its career, and entered happily upon a more peaceful and prosperous period of its existence.

The publication of "The News" had been resumed after the flood at what is now No. 369 Larimer street. During the summer of 1866 the front portion of the late "News" block was erected, and in the fall of that year the office was removed to where it remained until removed to its present new offices.

"The News" had always been published as an evening paper; but when the Denver Pacific railway was completed to Denver, in June, 1870, it was changed to a morning paper. Its presses and printing material were also enlarged and improved, its size was increased, and in many other particulars it began to assume the proportions and airs of a metropolitan paper, in full accord with the progress and demands of the times.

No biographical sketch of "The News" would be complete without an especial mention of the character, circulation and influence of "The Weekly News" during this period of its history. Writing of the time prior to the advent of the railways and of the extension of telegraph wires over the (then) territory, and judged by the facilities, or lack of them, for the collection of news, "The Weekly News" of that period was the best and widest circulated paper ever published in the West, if not in any country.

Mr. Byers was, after the dissolution of the old firm, sole proprietor of "The News" for eight years. During this period Denver grew rapidly in business, population and commercial importance, and from time to time "The News" was enlarged and its publishing facilities increased to keep pace with the progress of the City and State. As it had been the organ of the mining community of 1859, so it was the leader of the public spirit and enterprise which from the advent of the

railroads rapidly propelled Denver forward toward the commercial supremacy of the present.

In 1877 a stock company was organized known as the Rocky Mountain News Printing Company, but Mr. Byers held the entire stock, save a few shares which stood in the name of employees of the office in order to give the new corporation a legal status.

In May, 1878, Mr. Byers, after a proprietorship beginning with the first issue of the paper and extending over a period of nineteen years, sold his interest in "The News" to Hon. W. A. H. Loveland, and retired from the profession of journalism in which he had so long held so useful and so eminent a position. As his name now disappears from this history, it need only be said that he had fully and faithfully redeemed the promise of his salutatory, made in the first issue of "The News." Under his proprietorship, the most important factor in the forces and influences which had conduced to build up a great City and great State, "an empire in the Rocky Mountains," had been the journal which he had created and conducted to a successful issue.

"The News" is one of the largest, best and most enterprising daily papers published West of Chicago. It has a large and growing circulation, is well patronized as an advertising medium, and in all respects might be called a first-class newspaper.

"The News" has an immense job department, equipped with the latest improved machinery, and capable of turning out the finest work and all classes, up to the mammoth show advertising sheets, with neatness and despatch. The present quarters of "The News" are in the handsome Patterson & Thomas block, a five story structure of brick and stone, of which they occupy the entire fifth floor and basement, with a handsomely fitted up office on first floor. The fifth floor is used entirely for type-setting and book binding. Their bindery is worthy of special mention, being the largest and most complete West of Kansas City.

The basement is used principally for press work, a portion only being used as a stock room.

In June, 1880, Mr. John Arkins purchased a one-fourth interest in "The News," which, in July, 1879, had been made an eight-page paper, and at once assumed its active management and editorial control. He immediately saw the necessity for another improvement, not only in the appearance of the paper, but in the facilities for its publication. A new dress was purchased and a new cylinder press, capable of running 4,000 impressions an hour, added to the office, and on the 16th day of November, 1880, "The News" appeared in the new improved form. Again it was said that the paper was in advance of the times, but its manager read the future with a truer eye than those about him, and a few months only were required to demonstrate the fact that "The News" had only anticipated and made ready for the pros-

perous days which soon crowded upon the city and infused new life into its commercial and social circles.

On the 15th day of March, 1886, the Loveland interest in "The News" was purchased by Messrs. John Arkins, J. M. Burnell and Maurice Arkins. The continued prosperity of the paper and the unprecedented growth of its circulation was already taxing the capacity of the office and press, when the disastrous fire in the Academy of Music block injured both to such an extent as to render them no longer adequate for the demands made upon them. A new dress, a new press and a stereotyping process was purchased, and on the morning of October 3rd, 1886, "The News" was issued in a new and handsome dress, from stereotype plates, and printed on one of Hoe's celebrated presto perfecting presses.

#### THE DENVER REPUBLICAN.

The first number of "The Denver Republican" was issued on September 16th, 1879, less than ten years ago, under the management of the late Charles B. Wilkinson. It was founded upon a plant that had a varied fortune, and from which had been given to the people, journals advocating widely diverse principles.

Col. Wilkinson brought to his new venture talents of the highest order and wide experience, both as a journalist and a politician. His native wit and ability at once placed the paper in the front rank of Colorado journalism. Lacking sufficient means to conduct the paper as he desired, he sold the plant on November 14th, 1880, to "The Republican Publishing Company," which had been organized the day before, and he at once withdrew from the paper's management. The new company represented a capital of \$50,000, and was owned by Hon. George T. Clark and Gen. Joseph E. Wilson. From an eight-column folio they increased it December 20th, 1880, to a six-column quarto, adding a new dress and otherwise improving the mechanical department. The circulation of the paper began to increase very rapidly, and additional room and more improved machinery was demanded.

On June 20th, 1881, Messrs. Clark and Wilson transferred the entire capital stock of the company to the present management. The policy of the paper was in no wise changed, but was strengthened in every department.

August 6th, 1881, the capital stock of the company was increased to \$100,000, made necessary by the increased demands made upon the paper by the public; the circulation had wonderfully increased, and it became absolutely necessary to increase facilities and place the largest and latest improved machinery in the mechanical department. The ground where the magnificent "Republican" building now stands was immediately purchased and Architect Robert S. Roeschlaub employed to draw plans and proceed with the construction of a suitable home for



the greatest daily west of St. Louis. The contract for the erection of the building was let to Messrs. Hallack and Howard and the building completed and ready for occupancy April 4th, 1882. The building was at once equipped with the latest modern improvements and the best machinery that money could buy. Their presses and such other material as could not be manufactured in Denver were purchased East, and included a magnificent double cylinder Hoe press and Chambers' folder. The machinery, except that used in the job department and binding, is all located in the basement, where it is most conveniently arranged. On the first floor of the building and in front is situated "The Republican" office, which, for completeness and finish is not excelled in the United States.

The second, third and fourth floors are conveniently arranged for the various departments of the paper and complete in every detail. The building is heated throughout with steam and lighted by incandescent electric lights.

Disconnected from this fine block is the job department and bindery, one of the largest, if not the largest job office West of the Mississippi river. The entire establishment is under the direct charge of Manager K. G. Cooper and able assistants.

The following are the officers of the company at the present time: President, N. P. Hill; secretary, Crawford Hill; treasurer and manager, K. G. Cooper. Mr. Cooper has been manager of the paper since it was purchased June 20, 1881, and no paper in the West has made more rapid progress in so short a time as "The Denver Republican."

On August 11, 1884, The Republican Publishing Company purchased *The Denver Tribune* with its franchise and good will, and material. This necessitated the purchase of perfecting presses, new boilers, engines, new machinery, and the transfer of the job department from the "Republican" to the building on Blake Street, that the entire building on 16th Street might be used for the paper. "The Republican" now has two improved Bullock perfecting presses with a capacity of 12,000 each per hour. The daily circulation has increased from 2,000, when it was purchased by the present management to an average daily circulation of over 14,000 being the largest circulation of any paper between Kansas City and the Pacific Coast. The continued growth of the paper necessitated the addition of another story during the present year, which now makes the building five stories with the basement.

A new and handsome dress was purchased June 21 of that year. It is now the best and most completely furnished office in the West. It carries a pay roll of two hundred employees in Denver, and has over one hundred paid correspondents out of the city. Every department of the paper is under the management of experienced and capable men. The working organization is as complete as it is possible to

Entering Boulder Canon, Colo., on line of Union Pacific Railway.



make it. It is the leading daily paper of the West, and ranks among the foremost journals of the country.

#### THE TIMES.

"The Times" was started as *Daily City Items* in 1870 by Cad. E. Hagar and S. T. Sopris. They soon changed it to "The Denver Evening Times," and conducted it as a theatrical paper. In 1871 R. W. Woodbury purchased it and soon made of it a newspaper which he conducted with credit to himself and great good to Denver, gradually bringing it up to a high standard.

In 1882 he sold out to his son, Frank Woodbury, who conducted it with fair success until June 11th, 1888, when its present proprietor, W. H. Griffith, bought the paper. Mr. Griffith immediately organized a strong editorial force and business management, which has had the effect to make "The Times" a marvelous success.

When Mr. Griffith assumed control, the paper had a daily circulation barely reaching 3,000, an eight column folio, printed on a Campbell cylinder press, employing an editorial force of five men. Its telegraphic service was confined to the Associated Press service. Shortly after Mr. Griffith took charge, a Scott perfecting press was purchased; capacity 15,000 per hour, and is the only press in the city that is capable of printing a nine-column quarto sheet.

The editorial force was increased to ten men, of marked ability, under the management of Richard Linthicum, an able journalist of more than local renown.

Mr. Griffith is the general manager of the paper with Hal Gaylord, an able assistant. Mr. Griffith is a young man scarcely 32 years of age. He is an Eastern gentleman, educated for the law, which he has practiced more or less for some years; but all this time more or less connected with the newspaper business, for which he seems naturally adapted. For two years prior to the purchase of "The Times" he was associated in the law business in this city with Senator E. O. Wolcott.

Hal Gaylord commenced the newspaper business at a very early age and is thoroughly competent to fill any position, in the management of a paper, that may be assigned him. He is a young man, 26 years of age, and notwithstanding his youth has served in one capacity or another on newspapers in Denver for 11 years, commencing with the old *Denver Tribune* in 1878, and remaining with that management six years. In 1884 he accepted a position on "The Daily Times" under Mr. Woodbury and has since been connected with the paper, having been retained by Mr. Griffith. Richard Linthicum, the managing editor, is but thirty years of age. The paper is therefore managed by young men who have a future before them that will probably land them at the top of the journalistic ladder; that is, if the first year's success is any criterion.



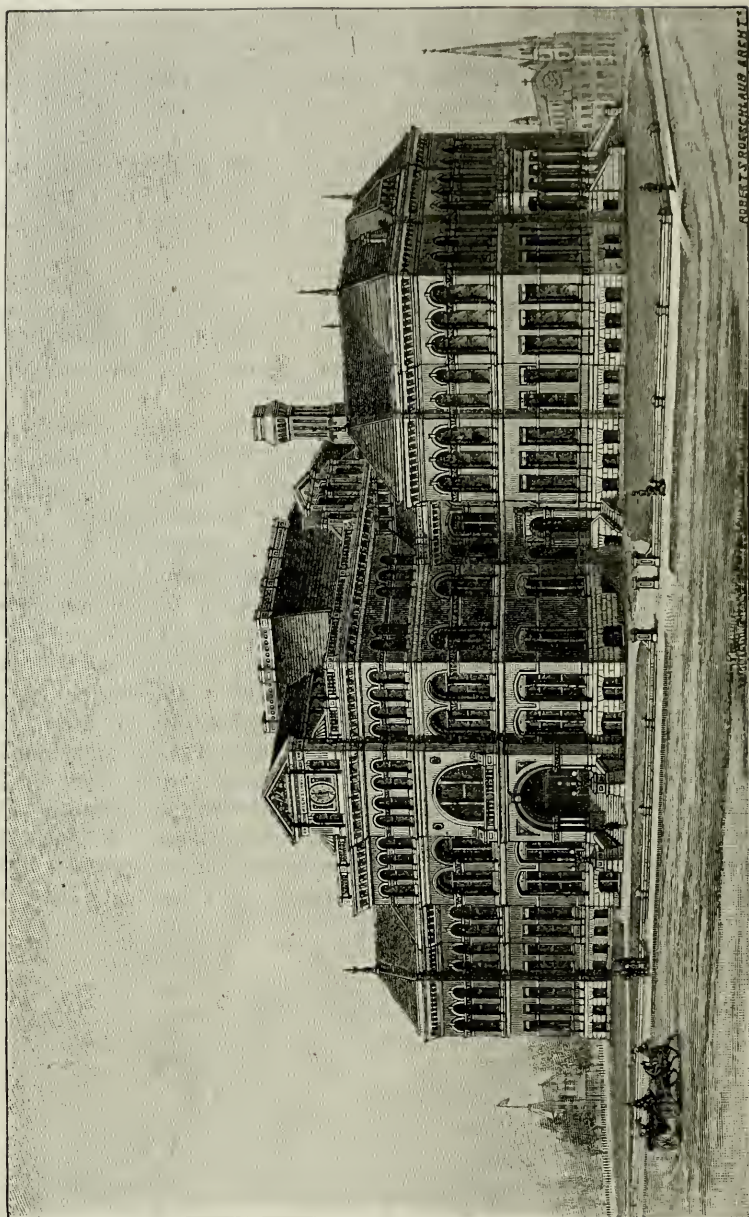
From a daily circulation in June, 1888, of less than 3,000, they have succeeded in gaining a daily circulation at this time of 9,700 which will soon pass the 10,000 notch, the average increase in circulation being already at the rate of 1,000 per month.

This paper has been enlarged from four to eight pages; it has a new dress, and is altogether a paper of very creditable appearance. "The Times'" telegraphic service has been much improved. In addition to Associated Press service, it includes special from Chicago and a special service covering the important cities of Colorado, Utah and Wyoming, besides which negotiations are pending to add a cable service for the Saturday's paper.

Financially, the paper has paid Mr. Griffith very well, notwithstanding he expected to run it at a loss for one year, the paper having been on a losing basis at the time of the purchase. If "The Times" continues to increase its circulation as at present, another Scott press will have to be added to the equipment.

In addition to the three dailies mentioned, we have a German paper published daily. The weekly and monthly papers are so numerous, that space does not permit us to describe them. In connection with the description of our newspapers, it is eminently proper to mention some of the local representatives of eastern journals.

Jacob S. Hirsh, special correspondent for the Boston *Herald* and *Globe*, New York *Sun* and *Tribune*, Philadelphia *Times* and *Press*, and other leading journals in the East, is a young man scarcely 22 years of age; born and educated in German. He has been three or four years in the newspaper line in various cities; at Harrisburg, Pa., on the *Evening Star*; at Baltimore, Md., on *Morning Herald*; at Savannah, Ga., on the *News*; then on the Omaha *Bee*, in which his cousin, Max Meyer, is a stockholder. Mr. Hirsh remained on the *Bee* a few months, when he accepted, in the fall of 1888, a position on the Denver *Republican*, under Managing Editor Stapleton. He remained with that paper only a short while, when he entered the field as special correspondent representing the before mentioned eastern dailies.



High School, Denver, Colorado.

## DENVER SCHOOLS.

SPACE does not permit of a complete description of all the school buildings, we therefore confine our full description to the High School and one ward school.

School district No. 1, comprises what is generally known as East Denver. The assessed value of property within the district is over \$36,000,000, on which the tax for school purposes is about  $4\frac{1}{2}$  mills annually. The district contains thirteen large ward school buildings, and the High School. The value of school property may be clearly stated at \$1,250,000. The bonded debt of the district is \$75,000 in 5 per cent. bonds. The school buildings are among the most substantial and handsome structures of the city, and combine all the elements of convenience, light and comfort, and even elegance that could be desired in public school houses.

The new Denver High School building is the finest public school building in America, excepting one in Boston, which only equals this. The structure and grounds occupy one square block, the building cost \$300,000. The central portion of the building is 87 feet wide and 140 feet deep, the two wings each 94 feet long and 77 feet deep. Total length, 475 feet. From foundation to dome in center of building the height is 111 feet; the height of each wing is 79 feet. The foundation of the building is constructed of stone, and the building of pressed brick with stone trimmings. There are six entrances to the building, all of granite steps. Of the entrances three have stone porches. The main entrance is 20 feet wide, with a porch 18 feet deep. The doors are of walnut and butternut. The main entrance is in shape of an elliptical arch with columns, carved capitals and panels, above which is a stone mould with a stone balustrade. At the roof is a handsome pediment of stone, in the center of which is the seal of the school district No. 1, and the words "High School" in raised letters and surrounded with an ornamental figure. All around the windows of the second story are arches with carvings. Entering from the main entrance is the vestibule 26x24 feet. There are two rooms on each side 27x19 feet; superintendent and board on one side and principal's on the other.

Connected with the superintendent's room is an office, 16 feet square. The reference library-room connected with principal's room is 16 feet square. From the vestibule the main hall is entered by three double doorways. The hall is 112 feet long, the central width is 61 feet, and side porticos 25 feet. Off the main hall are three



class rooms, 26x16 feet each. To the right is a vestibule connecting with the side entrance and connecting with library, 64x46. Off the library are reading rooms and library office. On the left side of the main hall are four class rooms, 32x29 feet each. To the right and left of the main hall are two staircases to the upper floor, each 7 feet wide, opening into the second story hall, of same dimensions as the first hall, in which are two railed openings 40 feet long by 11 feet wide, looking down into the hall. In the front portion is the senior class room, 54x36, with two recitation rooms, 27x18 feet each. In the rear are three junior class rooms, each 26x26, with cloak rooms, etc. In the rear of the staircases are two recitation rooms, each 27x16. In the right wing is the assembly and lecture hall, 62x72, with a platform 15x24, and a seating capacity of 600. To the left of main hall are four class rooms, each 32x29, with cloak and toilet rooms, the third story of central portion opening is a hall 140 feet long. In front is an art room, 84x38, and in rear are chemical physiological laboratories, each 42x36, which are furnished with the latest appliances. In the dome is an observatory, arranged with the necessary mechanical devices for mounting the telescope, of about 20 feet square from the roof, from which a splendid view of the city and surroundings, can be obtained.

The main hall, wainscoting and staircases are walnut, the principal's and superintendent's rooms in butternut and the class rooms in butternut. The entire corridors and rooms are paneled with wainscoting to the height of about 4 feet. The desks are of hard wood. The main halls are tiled and handsomely frescoed.

In the basement are drill rooms, armory, janitor's rooms, boiler, store rooms, natural history rooms and girls' retiring rooms, with laboratories and closets.

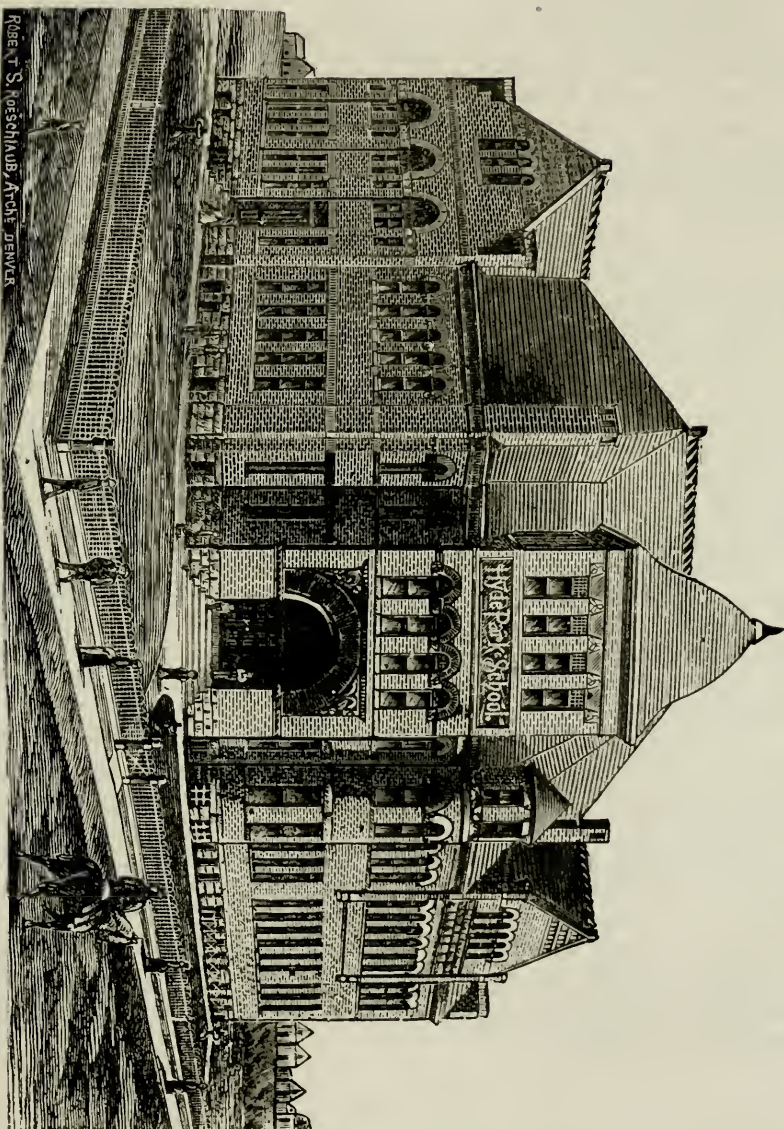
The schools are divided into twelve grades, four in primary, four in grammar and four in the High School, so that twelve years are required to cover the public school course of the city. The last city enrollment showed in district No. 1 an enrollment of 12,000 and an attendance of 8,000.

One of the principal ward schools in Denver is the Hyde Park School, a description of which will give the reader a good idea of all the others, cost of construction considered, some more, some less.

For some time the "Nebraska" and "Gilpin" schools have been greatly crowded, owing to the rapid building up of the northeast quarter of the city.

To provide suitable accommodations for these children the Board commenced the erection of what is known as the Hyde Park School building.

In height it contains two stories for school purposes, and a semi-basement. Entering the basement through the janitor's private way, which is at the Southwest angle of the building, we pass down a short



Hyde Park School, Denver, Colorado.

flight of stairs into a small hall, which leads to the janitor's quarters in the South center of the building. Here we find four well arranged and thoroughly lighted rooms. First the living room, 17x15, with large closet adjacent; next the kitchen, 17x11, containing sink and other conveniences.

From the living room we enter two bed rooms, 14x15 and 14x11, with ample closet accommodations. A good cellar is also provided. These rooms are all finished in pine, painted, and are arranged, lighted, and ventilated with a view to preserving the health of the janitor and his family, and the cleanliness of the quarters, thus guarding the health of the little ones who spend so much of their young lives in the rooms above them.

From the janitor's room we pass into the semi-basement, which extends under the entire building, and is divided into rooms corresponding with the school rooms above, by the foundation walls which sustain the partitions overhead.

These rooms—if they can be so called—are not entirely cut off from each other, but open into the main central apartment by means of wide archways, thus enabling the janitor or his assistant to have an unobstructed view of every part of the entire basement. Of these various apartments, the dimensions of each of which is about 26x23, the one in the west center of the building is to be used as a lunch room for boys, and is fitted up with neat pine lunch tables and benches.

The boys' entrance thereto is from the outside, and near the west entrance to the school proper. A similar room in the southeast angle of the basement is fitted up for the use of the girls as a lunch room, and like that for the boys, has an outside entrance. In the north and east centers of the basement are similar rooms, to be used for storage purposes and tool room.

The building will seat 650 pupils. There are contained in this building 2.81 square feet of glass space, 554 cubic feet of air space, 33.86 square feet of floor space, and 4.4422 square feet of ground room for each pupil.

The contract price of the work, in building, fencing, water, etc., was \$70,171; changes made, as using cement instead of lime concrete, cellar room for janitor, and extra cupboard added, \$1,088.80, making the total cost of all improvements on the grounds, \$71,259.80.

The work was executed by Messrs. Hallack & Howard, under the immediate management of Mr. Thomas Rundel. Captain Robert S. Roeschlaub, the supervising architect of the Board, is the designer and supervised the work.

#### GILPIN SCHOOL.

This is a twelve-room building in the east part of the city, built to take the place of the old Stout School, condemned and burned in 1880. It was completed in January 6, 1882. Its extreme dimensions



are 94.6x136.6. The building cost \$46,000 and has seats for 629 pupils; 436 cubic feet of air space; 2.78 square feet of light surface and 29.46 feet floor space per pupil.

## LONGFELLOW SCHOOL.

Cost \$35,000, has seats for 449 pupils; 405 cubic feet air space, 1.85 square feet light surface and 24.48 square feet floor space per pupil. An adjunct building of two rooms is in the lot adjacent to the Longfellow School, with 120 sittings.

## WHITTIER SCHOOL.

Is a twelve-room building, cost \$45,000, completed in September, 1883; seats 650 pupils. The heating, lighting, ventilation and adjustment of rooms, basement, etc., are simply perfect.

## EMERSON SCHOOL.

Is an eight-room building, cost \$32,500; seats 440 pupils; completed in September, 1884. Heat, light, etc., equal to the Gilpin School.

## ARAPAHOE SCHOOL.

This is the oldest of the public school buildings, the corner stone having been laid with Masonic honors June 24, 1872; it is the only three-storied school house in the district. The exterior dimensions are 82x77 feet. It contains twelve rooms, of about 24x35 feet each; seats 662 pupils. Was considered a model school building when it was erected. Cost \$51,695. To-day the property would readily sell at \$200,000.

## BROADWAY SCHOOL.

This house was built in 1875, at a cost of \$21,144. It contains 407 sittings, 414 cubic feet of air space, 326 square feet of light surface and 27.52 square feet of floor space per pupil.

## TWENTY-FOURTH STREET SCHOOL.

This building was erected in December, 1879, at a cost to build, \$21,243. Seats 413 pupils; 428 cubic feet air space, 337 square feet of light surface and 26.74 square feet floor space per pupil.

## EBERT SCHOOL.

This building was completed November 8, 1880, at a cost of \$35,500. It has 413 sittings; 443 cubic feet air space 337 square feet light surface and 27.11 square feet floor space per pupil.

## SECOND DISTRICT.

School District No. 2 comprises what is known as West Denver. The assessed value of property in the district is nearly \$4,500,000. The census of the district shows children of school age numbering

nearly 5,000, and an enrollment in the schools of 3,260. The district has expended for grounds, buildings, improvements, furniture and apparatus, \$167,955.49 since January, 1880. The present value of school property in the district is upwards of \$500,000. The district has a bonded debt of \$100,000, bearing 5 per cent. interest. The school buildings are among the most perfect and convenient known to school architecture.

#### CENTRAL SCHOOL.

The Central School was erected in 1880 at a cost of \$21,717.43. The building is two stories high, with a basement; it is built of brick and faced with dressed Manitou sandstone. The basement is 10 feet high, and constructed of dressed lava stone. The building is 52x87, and seats 200 pupils.

#### GRAND AVENUE PRIMARY SCHOOL.

The building was built in 1882 as a primary school, at a cost of \$2,294.40. It contains 120 desks. The building is 20x80 feet, it is divided into two class rooms, has ample closets, wardrobes, blackboards, etc., and is heated with stoves.

#### THE FAIRMONT SCHOOL.

This school was completed in 1883, at a cost of \$19,128.75; it contains 285 desks; its dimensions are 43x79 feet, two stories and basement, and it is constructed of brick with stone foundations.

#### THE FRANKLIN SCHOOL.

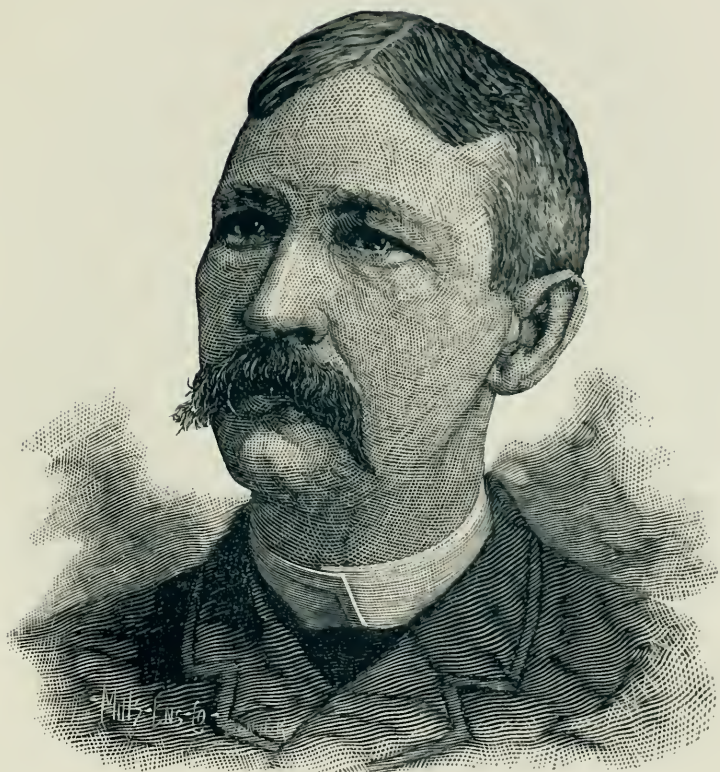
This splendid building was completed in 1884, at a cost of \$59,424.23, and built on lots which cost \$10,000. It contains 648 desks. It is the High School of the district. The building has a frontage of 148 feet, and a depth of 106 feet.

#### THE ELMWOOD SCHOOL.

This is a new and handsome building, completed in 1887; it cost \$30,000, and contains 432 desks. The entire arrangements and furnishings are the most modern and improved known to school purposes.

#### NORTH DENVER.

North Denver has four school houses, which contains 19 rooms. There are 1,120 pupils enrolled in the schools; and 26 teachers employed. The new Ashland Avenue School, almost completed, cost \$90,000. It is built of brick with stone foundations and trimmings, and contains 16 rooms.



HON. C. C. DAVIS.

Editor and Proprietor Leadville Herald-Democrat and Evening  
Chronicle.

Member General Inter-State Deep Harbor Committee.



## HON. C. C. DAVIS.

CARLISLE C. DAVIS was born in Glens Falls, N. Y., Nov. 4th, 1834; moved to Iowa City when a child; worked and learned the printer's trade while quite young; resided there until 1865, except the time he was in the service of his country. He enlisted in Company D. 44th Iowa, (Iowa, State University Company), and served as a private through Tennessee and Mississippi. After the close of the war, he removed to Cincinnati, where he was employed on the papers of that city until 1872. He was married February 8th, 1870. In 1872 he bought the St. Charles (Mo.) *Casmos*, which he conducted for about eight years. Mr. Davis came to Colorado in the spring of 1876, and was associate editor of the *Rocky Mountain News*, under Vickers & Cooper's management. In January, 1879, he went with the treasure hunters to Leadville, and started the *Leadville Evening Chronicle*, of which he has made a good success. In October, 1883, he purchased the *Leadville Democrat*, and conducted both morning and evening papers. In December, 1886, he added still another paper to his list by the purchase of the *Leadville Herald*, when he united the *Democrat* and *Herald*, and called it the *Herald-Democrat*. The consolidated paper has proven a grand success, and is the leading daily paper in Colorado, outside of Denver. Mr. Davis continues to publish the *Chronicle*, and owns the Associated Press franchise (entire) for morning and evening papers. While the duties of such a stupendous enterprise are tremendous, Col. Davis has proven himself capable, as is attested by the high standard of success he has been able to attain. He is a natural politician, and his voice is heard in every convention of note that the Republicans hold in the state, and he has had the distinguished honor to be one of the delegates from Colorado to the Republican National Convention of 1884.

In 1882 he was elected City Clerk of Leadville, and in February, 1883, was appointed postmaster of that city. Mr. Davis is a member of the Inter-state Deep Harbor Committee, in which capacity he displays his usual energy and interest.

Leadville has been Mr. Davis' home for the past ten years; his great interests demanding his closest attention; and although his home is at an altitude of about 10,000 feet, it is a rare one, supplied with every creature comfort, presided over by a congenial wife, who makes the few hours of the day which Mr. Davis may call his own, so pleasant that the cares of business have borne very lightly upon his brow.



GOVERNOR OF COLORADO.

*Job A. Cooper*



The above cut was engraved by the COLORADO ENGRAVING COMPANY (Fuller & Johnson proprietors), 1625 Arapahoe street, Denver. They are fast gaining a deserved reputation for skill and promptness. They make cuts for all advertising and illustrative purposes by wood engraving, photo. engraving and the chalk and wax processes. Artistic designs and drawings furnished when required. All who have use for cuts of portraits, landscapes, buildings, maps, lettering, etc., should call on or write them for estimates. THE COLORADO ENGRAVING COMPANY, over the Denver Packing Company, 1625 Arapahoe street, Denver.



## PRIVATE SCHOOLS.

Denver has many private schools of high standard. We mention a few:

Wolfe Hall is an Episcopal seminary for girls, and Jarvis Hall an Episcopal school for boys, both of which are large and flourishing institutions, and, having outgrown the demands, have just about completed new buildings for each school—Wolfe Hall on Capitol Hill, Jarvis Hall, at Montclair addition to Denver.

The Baptist Society has begun the erection of a large female seminary in Montrose addition to Denver.

St. Mary's Academy is a most excellent institution, under the care of the Sisters of Loretto of the Catholic Church, and numbers a large growing list of pupils.

The Denver University and Colorado Seminary is one of the largest educational institutions of the state, with a strong and capable faculty, fine buildings and various departments. The new university buildings, now in course of erection at University Park, when completed, will be the most extensive in the West. The university is under the charge of the Methodist Episcopal Church.

The Jesuit College, just completed at a cost of \$500,000—a Catholic institution in North Denver.

There are numerous business colleges, schools of elocution and kindergarten schools. Three medical colleges, etc., etc.

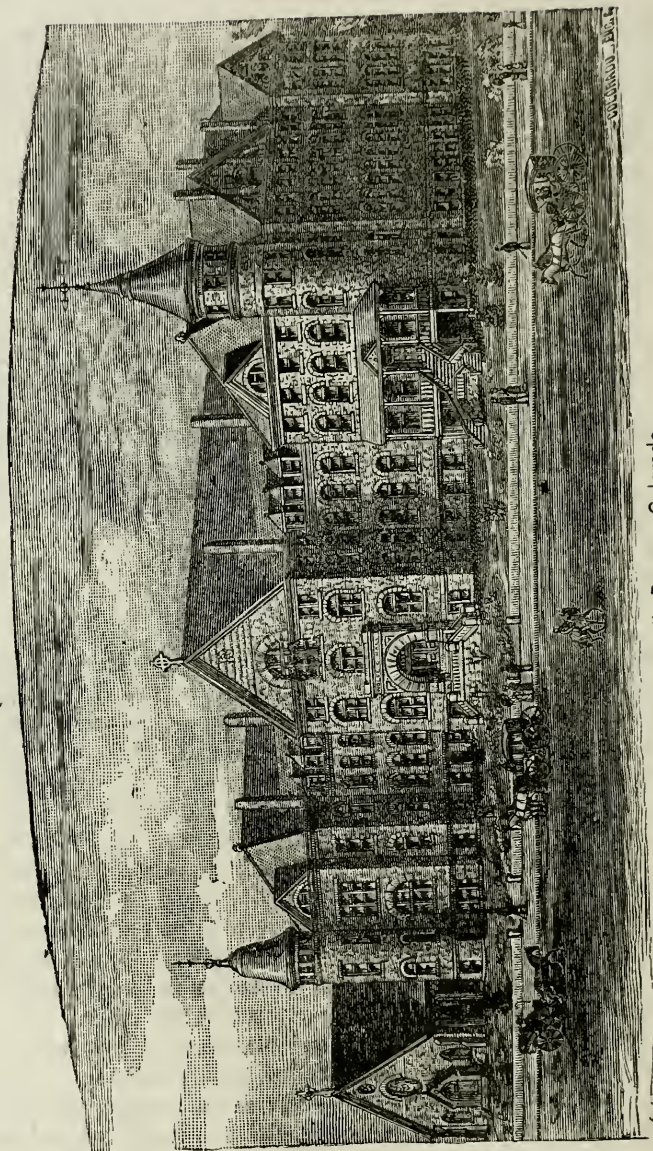
## WOLFE HALL,

A boarding and day school for girls. Wolfe Hall was founded in 1867 by the late Bishop Randall. The churchmen of Denver gave the lots for the main building. There were also generous gifts from churchmen in the East, especially from the late John D. Wolfe, of New York City, for whom the hall is named. His daughter, Miss Catharine L. Wolfe, has also been a generous patron.

The school was first located corner Champa and Seventeenth streets, in a fine, large brick building, covering seven lots. The school became so crowded that it was necessary to erect a more commodious structure on a block of lots secured some years ago on Clarkson street. The building is now completed and occupied; it is constructed wholly of Castle Rock lava stone, is four stories in height and imposing in appearance, and can be seen nearly ten miles away.

The ground floor is fitted up in the most convenient way, with a dining room, kitchen, laundry, scullery and study rooms.

On the second floor there are sixty-seven rooms, all models of elegance and convenience, and bedrooms for 123 beds, besides parlors, study rooms, vocal rooms and everything essential to comfort and luxury. A wide hall runs the length of the building, 225 feet. From the hallway in the center of the building there is a double flight of stairs leading up to the third story.



Wolfe Hall, Denver, Colorado.



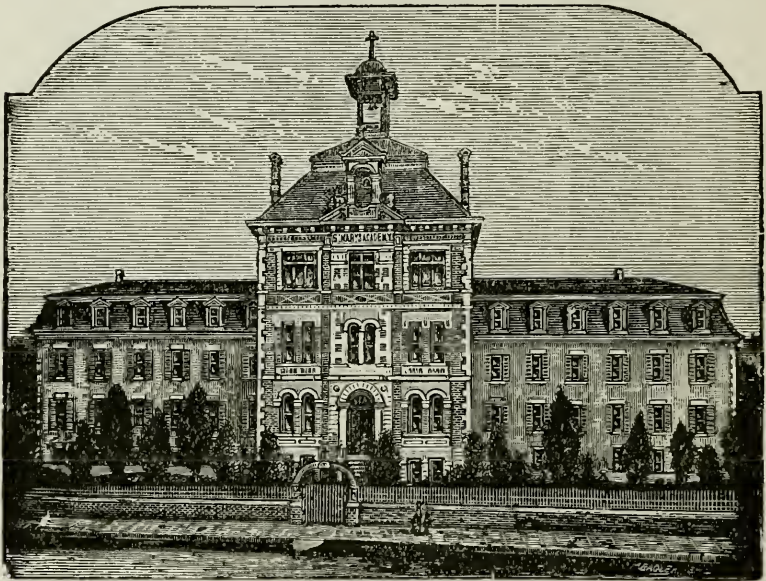
The third floor is divided into study rooms, 57x53 feet dormitories and music rooms. There are 20 of the latter, each one containing a piano. There are two wings to the building, which are used for living purposes. On the third floor there is a theatre, 97x52 feet. At one end of the room a large stage has been erected, while to the side are the dressing rooms for the performers. In the right turret a pair of stairs is constructed leading to the room in the garret above, where a splendid view of the city can be had. There are shafts in which the dust from the floor is to be swept, and through which it will be guided to the cellar, falling in a receptacle. There is also a linen shaft, and when the young ladies desire to send their clothes to the laundry, all that is necessary on their part is for them to step to the shaft and drop them, in a second or two later they will arrive safely in the laundry. In every room there is a closet, steam heater and ventilator. Proper ventilation is assured from the fact that all the vents are connected with the chimney shaft, which is 65 feet high. Every 50 feet there is a fire hydrant, and 100 feet of hose. In the large hallway there are at intervals of every 75 feet iron fire doors, which are closed in case of fire, to protect the other parts of the building. The floors and walls are all deadened in such a manner as to render it impossible to hear a sound on the floor below. The inside finishing is of Texas pine.

The aim of the school is to furnish to the West the best advantages for intellectual training, combined with social culture and Christian influence. The best educational standard of the celebrated schools of the East prevails in every department. In connection with Wolfe Hall is the Eclectic Club, a voluntary literary organization, whose ranks are open to students, former members of the school and alumnæ. Under its auspices is published the *Wolfe Hall Banner*, a spicy monthly of unusual merit, published in magazine form. The subject matter has high merit, and speaks volumes for the efficiency of the instruction and intellectual training imparted in the school. The school is a home where pupils find love and sympathy, and "are virtuously brought up to lead a Godly and Christian life." The aim is to guard them from the social evils of the world, and to surround them with the dignified influences of a Christian home. The beautiful order of the Church in the round of the Christian year is observed, and religious instruction in the Bible, prayer book and catechism is faithfully imparted. The officers are: Right Rev. Bishop J. F. Spalding, D. D., president, and Miss F. M. Buchan, principal, with an able faculty.

The board of trustees includes leading clergy and laymen of the church in Colorado. It is with great pleasure that we refer to Wolfe Hall, which, under its present management, has attained a high degree of usefulness, and is considered one of the best schools in the country. Its pupils, whilst coming chiefly from Colorado and ad-



joining territories, are drawn from points as distant as Canada and Texas. The tuition is thorough, and calculated to stir in the scholar a lively interest in the subject taught. The faculty is full, and its members rank high in the profession. A careful matron has charge of the house, and every endeavor is made to place the school on a high grade of efficiency. Miss Buchan, the principal, is the one to whom, with the assistance of Bishop Spalding, is due most largely the excellent standing of the school. She is a lady of extended and successful experience as an instructor and principal, she having, previously to taking charge of Wolfe Hall, been principal of the Diocesan School at Milwaukee. She is a strict disciplinarian, kind and firm, at once winning the respect and love of the young ladies under her charge. Her manners are faultless, and the proofs of her ability lie in the great success of Wolfe Hall, the leading ladies' school in the West.



ST. MARY'S ACADEMY FOR YOUNG LADIES, DENVER, COLO.

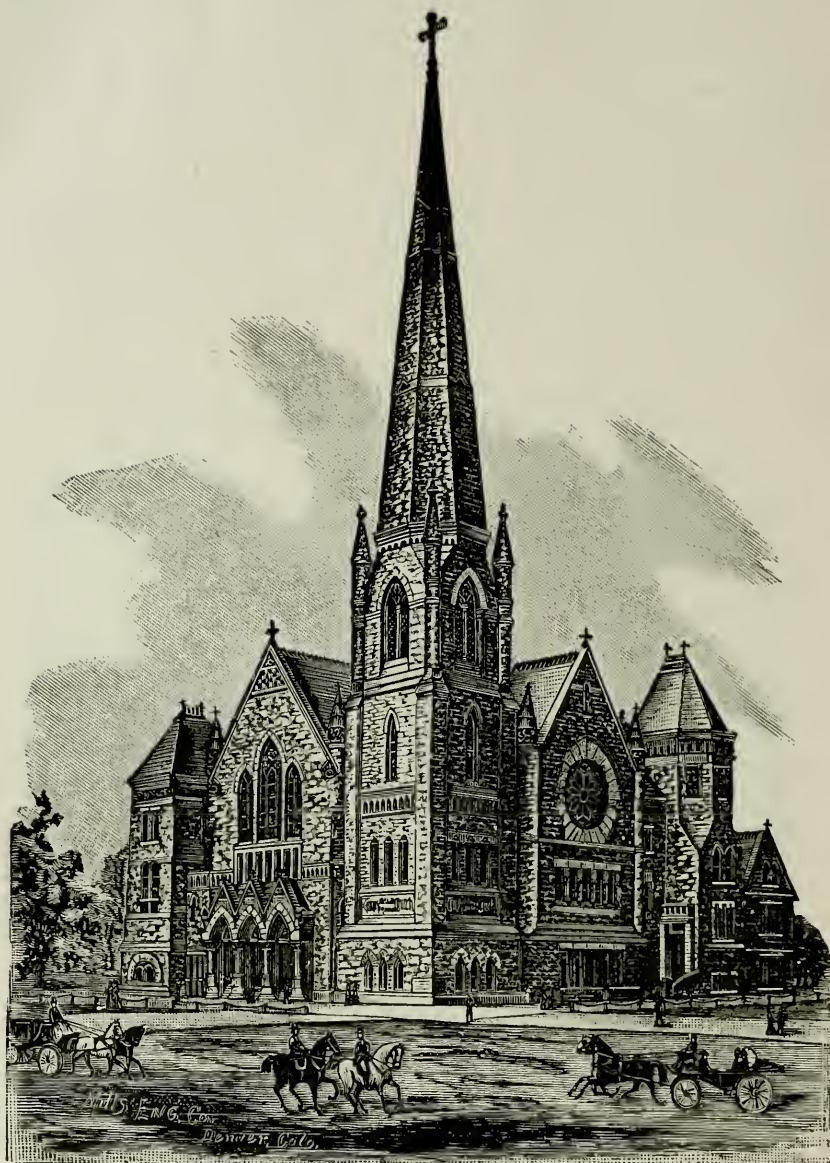
This academy was established in 1864, is under the care of the Sisters of Loretto, and is desirably situated. The grounds are ornamental and spacious, affording pupils the means of enjoyment and exercise. The large and elegant edifice, erected in 1880, is lighted by gas, heated by steam, and has hot and cold water distributed through the various departments. There are two features particularly noteworthy in this academy—excellent ventilation, and facilities of egress in case of fire.

In all that pertains to a refined education, in matters relating to health, propriety, and elegance of deportment, the young ladies receive the sedulous, maternal attention of the Religious of the Institute.

To facilitate the improvement of the students, a select library, consisting of historical, scientific, poetical and miscellaneous works, is open on recreation days for such as wish to spend their leisure hours profitably; and every effort is made to refine the mind by a course of judicious reading.

The following branches are taught: English, French, German and Spanish languages, elocution, algebra, geometry, book-keeping, history, geography, rhetoric and composition, mythology, astronomy, botany, grammar, arithmetic, orthography, geology, literature, natural philosophy, chemistry, physiology, general metaphysics, sewing and lace work, embroidery, bead and shell work.

Terms, per session of five months, for board, tuition and washing, \$100. Board during the annual vacation, if spent at the academy, \$18 per month. For particulars address the Mother Superior.



Trinity Methodist Episcopal Church, Denver, Colo.



## DENVER CHURCHES.

DENVER'S Churches surpass any city in America of 135,000 population—66 in number, of all denominations, range in cost from \$10,000 to \$250,000, and ranging in membership from 50 to 1,200.

The Trinity M. E. Church, just completed, is the largest church in the city; cost, exclusive of organ, \$210,000. The organ cost \$40,000, and was mainly the gift of that munificent, public spirited citizen, Isaac E. Blake, President of the Continental Oil Company, who gave almost as good a one to a church in San Francisco. The organ is pronounced by noted English authority to be the best and finest organ in the world. The Easter offering at this church last spring amounted to \$65,000, a sum said to never have been realized by one offering by any other Protestant church in the world. The Methodists have just completed the Evans Memorial Church, at a cost of \$100,000. The seating capacity of all the churches in Denver is said to be about 40,000.

The Denver church roster is now an encouragingly long one for a city of 130,000 people. It shows:

Seven Baptist Churches—The First Calvary, Broadway, West Denver, Bethany, Galilee, the Swedish Antioch and the Zion African.

Six Catholic Churches—St. Mary's Cathedral, the Sacred Heart, St. Elizabeth, St. Patrick's, St. Joseph's and St. Ann's.

Eight Congregational Churches—the First, Second, West Denver, Boulevard, Pilgrim, Olivette, Park Avenue and People's Tabernacle.

Five Episcopal Churches—St. John's Cathedral, Trinity Memorial Chapel, All Saints Mission, Emanuel and St. Marks.

Two Jewish Synagogues—Temple Emanuel and Ohava Imuna (orthodox Jewish congregation).

Five Lutheran Churches—English Evangelist, German Evangelist, First German Evangelist, Swedish Evangelist and Scandinavian Trinity.

Seventeen Methodist Churches—California Street, Evans Memorial, Fifth Avenue, First German, German, St. John's, St. James', St. Paul's, Trinity, West Denver German, North Denver, Argo, Southern Methodist, Swedish Free Methodist, Simpson Chapel Morrison Chapel.

Seven Presbyterian Churches—the Central, Fourteenth Avenue, Twenty-third Avenue, Highland, Westminster, United Presbyterian, Welch Presbyterian.

Three United Brethren Churches—Twenty-sixth Avenue, Smith Chapel and Mission Chapel.

Besides these there are the Central Christian Church, the German Reformed Church, Unity Church, New Jerusalem Church, the Railroad Mission Sunday School, the Blake Street Mission, and several other minor missions.

An active and powerful and growing religious organization outside of the church is the Young Men's Christian Association. Its sustaining membership is 311, active 401, and associate 300, making a total of 1,012. Its rooms are on Arapahoe street, between Sixteenth and Seventeenth. The reading room is provided with 106 papers and periodicals, including the best in the country, and is furnished with stationery free for members and visitors.

A movement is on foot to erect a new Y. M. C. A. block, to cost \$150,000, Hon. H. B. Chamberlin heading the list with a \$25,000 subscription.

## ARAPAHOE COUNTY.

DENVER is the county seat of Arapahoe County, and represents three-fourths of the wealth of the county. From the January, 1889, report of the County Clerk we give the assets and liabilities of the county:

RESOURCES.	LIABILITIES.
Assets in hands of County Treasurer other than delin- quent and unpaid taxes .....\$161,091 00 Delinquent and un- paid taxes prior to 1888, mainly uncollectable..... 51,930 25 Delinquent and un- p'd taxes for 1888 707,128 38	Overdraft Denver Pacific Railway bonds fund.....\$106,525 75 Overdraft County Jail bond, inter- est fund..... 161 41 Overdraft general fund..... 64,949 25 Bonded indebted- ness ..... 193,543 00 County warrants outstanding, not presented for payment..... 1,381 60 C'ty School fund mon'y's collect'd and not appor- tioned to School Districts ..... 3,143 11 State of Colorado on account of revenue collectd. 4,427 68 Unclaim'd estates 576 15
REAL ESTATE.	
Bl'k 208, E. Denver and Court House building..... 450,000 00 Bl'k 1, Hunt's Ad. and County Jail building ..... 50,000 00 Block 9, Whitsitt's addition and Poor House buildings. 42,000 00 South half of north- east q'rter, south- east quarter of southwest q'rter, north half south- east quarter and southwest q'rter of southeast q'ter of sec. 11, town- ship 3, south of range 68 west, & Poor Farm bldgs. 38,000 00	374,707 95
<u>1,500,149 63</u>	
\$1,500,149 63	<u>\$374,707 95</u>

(Signed) JOSEPH SMITH, County Clerk.

The exhibit is gratifying, and shows the financial condition of the county to be first class, with a bonded indebtedness of less than \$200,000. The valuations of realty owned by the county are far below the present selling prices of real estate near that owned by the county. Twice the amount that appears in the Clerk's report would be nearer the present cash value.

The Board of County Commissioners of Arapahoe County is composed of good substantial business men, and the affairs of the county are by them managed in an economical manner.

Hon. J. M. Brown, the chairman of the board, is an old resident of Arapahoe county and for many years a farmer near Littleton,



where he lived until recently. His time being entirely occupied with county affairs, he has moved to Denver, the county seat. Mr. Brown was a member of the board for one term of two years several years ago. He was elected in the fall of 1888 for two years, and upon the organization of the board was chosen chairman. He makes a good presiding officer, and is deservedly popular with the board and the people.

Hon. John G. Lilley lives at Littleton; is largely interested in that suburban city; runs a flour mill there, and is interested in other lines of business. He is a man of good business ability, highly regarded by his constituents, and a worthy associate of the members of this board.

Hon. W. M. Robertson resides in Denver, and was for several years City Health Commissioner. He is a gentleman of high social, political and business standing; a man of sterling integrity, and one who interests himself largely in county affairs. He owns considerable Denver realty, and is regarded one of Denver's most substantial citizens.

Hon. John C. Conway lives at Brighton, a Denver suburb, where he is engaged in the mercantile business on quite an extensive scale. He was for a long time at the head of the famous Brighton Creamery. Mr. Conway is a highly respected citizen, an excellent business man and a model County Commissioner.

Hon. E. R. Barton is a resident of Denver, for a long time prominently connected with the Continental Oil Company. He was chairman of the Board of County Commissioners for two years just ended, and is now treasurer of the Strayer Investment Company. Mr. Barton is a very prominent dealer in Denver real estate, and has accumulated a comfortable fortune by his strict attention to business. He is a gentleman of strict integrity and of great personal popularity. He was a candidate for Mayor of Denver in the spring of 1889 on the Democratic ticket, and, notwithstanding the city is Republican by more than 3,000 majority, Mr. Barton came within 200 or 300 votes of being elected; not satisfied with the result, he has entered a contest for the office, and the same is now (May 15th) before the courts.

Earl M. Cranston, the County Attorney, is a young man only 26 years of age, a native of Ohio. He had a university education and afterwards attended the Cincinnati Law School and graduated with honors. He has resided in Colorado about eleven years; was elected to the Colorado Legislature in the fall of 1888; served during the last session of that body with credit to himself and constituents. Mr. Cranston was appointed County Attorney by the present Board of Commissioners while he was sitting in the late session of the General Assembly. His advice is highly regarded by the members of the board, and, by his excellent legal ability, he has succeeded in building up a good private practice.



City Hall.

Arapahoe County Court House.

United States Post Office.

Colorado State Capitol.

U. S. Mint.

PUBLIC BUILDINGS OF DENVER.



## COLORADO SPRINGS.

COLORADO SPRINGS' history may be said to date from 1871, when the town site passed into the hands of the "Colorado Springs Company," and the arrival of the Denver & Rio Grande Railway in October of that year, formed a permanent basis for a future prosperous city. The "Colorado Springs Company" was then and is now, managed by conservative, high-toned gentlemen, a provision being inserted in every deed forever prohibiting the sale of intoxicating liquors upon the property thus conveyed under penalty of forfeiture to original owners. The provision has had the effect of building up a moral and Christian community, unexcelled in staid old New England.

The primary object of fixing this location, for a populous center, was its proximity to the famous Springs at Manitou, and the unequalled natural advantages here enjoyed for building a large city, the lay of the ground being nearly level, except that it has a gradual inclination to the South sufficient for surface and sewerage draining.

The city was laid out with large squares, wide streets and avenues, two handsome parks, each two blocks from the center of the city to the North and South. The streets and parks were, in the earliest days of the city, planted with nice shade trees and handsome lawns, the wisdom of which action by the promoters of this beautiful city, is now apparent in the handsome rows of large trees along either side of all streets and avenues throughout the city; and in well kept lawns of the parks. The city presents the appearance of a beautiful park with its handsome lawns and flower gardens, well kept streets and trickling streams, that flow on either side of all streets at the base of the shade trees, giving them life and adding beauty to the already beautiful scene.

Colorado Springs might well be called the city of the gods owing to its proximity to the Garden of the Gods, and being planted at the foot of that Monarch of the Rockies, Pikes Peak; which pierces the heavens with an altitude of nearly three miles, encouraging by its noble proportions the higher aspirations of man, and at night standing sentinel over this beautiful city.

Within a radius of five miles more natural grandeur and beautiful scenery can be reached than from any other spot on earth. Their praises have been sung by poets, and their beauties portrayed by artists, since Colorado has been known. A partial list will suffice to give our readers a fair idea of the many attractions possessed by this.



sacred city, and we hope, create a longing for a nearer acquaintance with this health giving and pleasure satisfying spot, which nature has so lavishly endowed.

Garden of the Gods, Maniton, Glen Eyrie, Austin's Bluffs, Cheyenne Canon, Grand Caverns, Williams Canon, Ute Pass, and Rainbow Falls.

Colorado Springs, as a material city, presents attractions that few spots in the West enjoy. It is a city of about 12,000 inhabitants admirably situated to become a great commercial mart. It is 75 miles South of Denver and is the key to the beautiful Ute Pass, which has



Alamo Hotel, Colorado Springs.

lately been converted into a great commercial highway, by that enterprising railroad, named the Colorado Midland, which throughout its course through the Mountains to Leadville, Aspen, Glenwood Springs, and New Castle, affords its patrons an ever changing and magnificent panorama of mountain scenery not surpassed on the American continent,

Colorado Springs has many elegant residences, with well kept lawns, profuse with flowers, shrubs, etc., while it is well supplied with large stores and stocks of merchandise of metropolitan dimensions and assortments.

Throughout the city the finest natural drives of America are encountered, and it is a delight to ride about this beautiful city at all

seasons of the year. The climate resembles that of Denver, except that in summer it is a trifle cooler, and in winter a trifle warmer, owing to its proximity to the mountains. The city is equipped with a Street Car system, electric lights, and other modern and metropolitan improvements.

Colorado Springs is well supplied with Hotels and first-class Restaurants, all run at moderate rates, considering the superior accommodations.

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### ALAMO HOTEL.

THIS hotel is one of the best kept hostelries in Colorado Springs, complete in all its apportionments, lately enlarged and refitted, containing the modern improvements. The proprietor, J. M. Sellers, is accounted one of the most genial of hosts, accomplished and courteous; his terms are moderate, considering the accommodations afforded, \$2 to \$3 per day. The table is constantly provided with the best the markets afford, drawing largely upon Denver, the greatest market west of Chicago. A well equipped livery is run in connection with this house, where as fine teams can be obtained as may be found in the best eastern stables. This branch of Mr. Seller's business is run upon a business basis, rates reasonable. Tourists or health seekers will do well to investigate the advantages offered at the Alamo when contemplating a visit to Colorado. Its location is central, opposite the United States Postoffice and adjoining Alamo Park, a well kept and beautiful square, with large shade trees and a fine lawn. Scattered throughout in convenient spots, the weary pedestrian finds easy chairs and benches, such as parks are usually equipped with, a fountain in the center and streams of water flowing through from every direction. The recent addition to the hotel has made quite an improvement in the general appearance of the house and gives the proprietor over 100 additional rooms.

## WEST COLORADO SPRINGS.

**W**EST COLORADO SPRINGS joins Colorado Springs, only a street between. It lies on both sides of Colorado Avenue, the only direct drive from Colorado Springs to Manitou. This avenue for about one mile passes through this beautiful tract of land. The lots are laid out 50 feet by 150 feet, and each half block is inclosed by a wire fence. Streets are being graded, city water pipes are connected with each half block, affording a supply of the purest water, and streams of water from an independent ditch course their way along each side of all streets, as in Colorado Springs proper.

Street cars run through this suburban city from Colorado Springs to Colorado City; cars running every fifteen minutes. It is believed that it will be only a short time until electric or cable cars will supersede the horse cars, and the line extended to Manitou.

The improvements in West Colorado Springs consist in, besides electric lights, city water works and graded streets, a beautiful row of large trees which extend the whole length of Colorado Avenue, and hundreds of fine residences either completed or under construction. Present appearances indicate that this will be the most popular residence portion of Colorado Springs. It lies beautifully, overlooking the valley of Fountain Creek, the City of Colorado Springs, and Colorado City. It just touches the edge of either, extends north of the avenue about one half mile, terminating at some point high up on the mesa, and affords an excellent opportunity for pleasing the most fastidious tastes for choice building sites. This property was platted and placed on the market in February, 1888, by A. L. Lawson and associates, and the property has since been changing hands very rapidly. Improvements during the past few months have been surprising, even to the initiated. Handsome homes have been erected, trees planted, lawns cultivated, making the entire tract more attractive than many parks we have seen.

Mr. A. L. Lawton, the prime mover in these West Side improvements, was born in Lowell, Dodge County, Wisconsin, in the year 1848; resided in that county until he was 17 years of age; afterwards lived in Oak Grove and Milwaukee; educated at Waland University, at Beaver Dam and Lawrence University, in Appleton; moved to Burlington, Wisconsin, and engaged in woolen manufacturing; continued in the same until his health became so impaired that he moved to Colorado, where his health has been entirely recovered. He came to Colorado Springs in 1874, and has engaged in real estate and insurance business ever since; he has made some of the largest real estate transactions in El Paso County, and it might be said, has been prominently

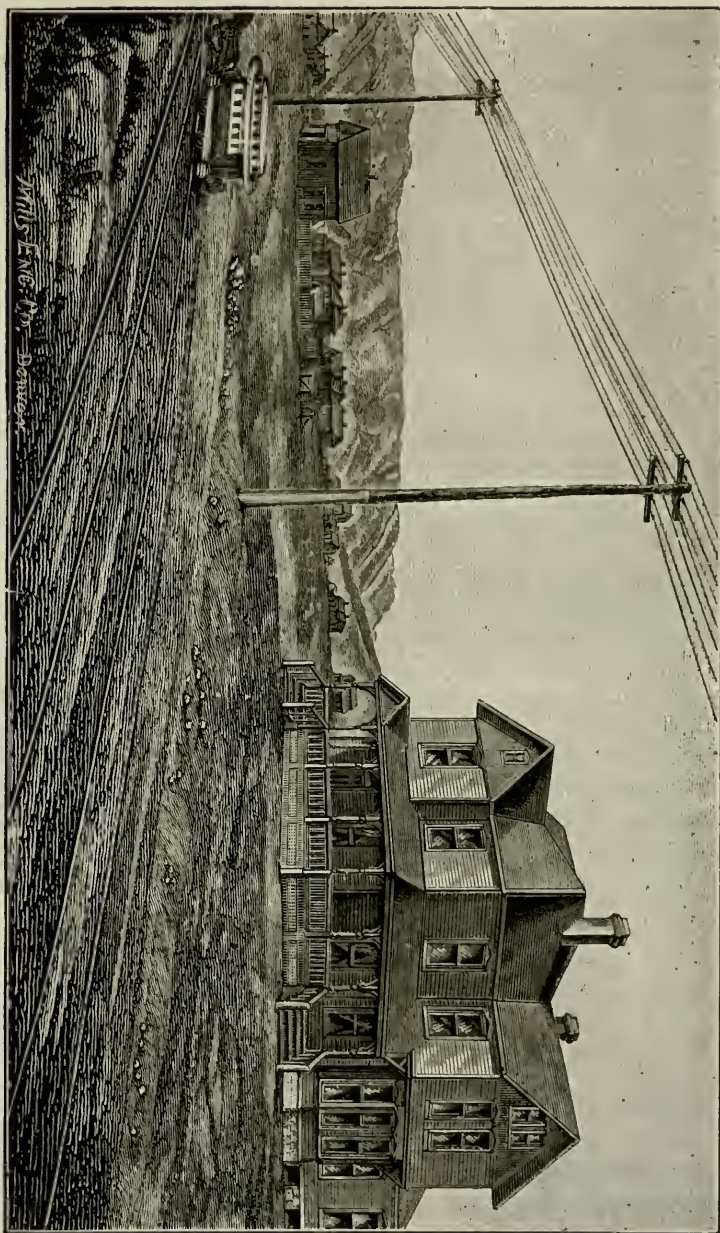


identified with all of the large deals. He is an honored citizen, a good business man, and can be relied upon by investors; he is a member of the City Council, a prominent member of the Board of Trade, and is always found in the front ranks of those who inaugurate public enterprises, and interest themselves in the welfare of Colorado Springs:

All that Colorado Springs is to-day she may thank a few gentlemen like Mr. Lawton for, they know Colorado Springs so well that they believe in letting the world know what a good business point, as well as a great sanitarium and health resort, it is. In Colorado Springs, as in every other city, there are a certain few who have grown rich, healthy and strong, and who are so selfish that they do not want others to know of this delightful spot, fearing, lest others should follow their example, that some one will get some of their "filthy lucre," or grow to more wealth and influence than they; they are willing the tourist and health seeker shall come to their beautiful city and spend their money, but cry, "hands off," when their business is liable to be affected by competition; they are content to advertise Colorado Springs as a beautiful health resort, but neglect to state the fact that business is one of Colorado Springs' greatest elements of strength.

Mr. Lawton is at the head of a few progressive business men who are not so selfish as to hide the brightest light of the city's progress under a bushel; primarily, the health qualities of the city were sufficient to attract the attention of the eastern public. "The world moves on," and the health seeker has forgotten the cause of his visit to the foot of Pike's Peak, and has neglected the cure; we now find him well and deeply engrossed in the business affairs of this ambitious city, rapidly repairing a fortune that ill health in the east had impaired.

A. L. Lawton and associates have placed some excellent properties on the market from time to time, none of which has lost the investor one cent; but, on the contrary, has increased his invested capital, some thirty, some forty, and some an hundred fold, in a few months, and sometimes in as many weeks. Mr. Lawton's judgment of realty values cannot be surpassed. Any representation he may make can be relied upon in every particular, and any property that he is interested in may be depended upon as strictly first-class. The crying need of Colorado Springs is for more such men as A. L. Lawton.



Residence in West Colorado Springs, Colo.

### GREEN MOUNTAIN FALLS.

ONLY about two years ago the now famous summer resort, known as Green Mountain Falls, was unknown, except to a few freighters, who have for several years used the Ute Pass as a wagon trail, over which to convey supplies to the mining camps above Leadville. It is situated about 15 miles from Colorado Springs, and in the Ute Pass, where the canon widens out into a beautiful park, with a slightly rolling surface, and where innumerable falls are formed by the many mountain streams, having their sources within a mile of this beautiful spot, high up in the mountains, probably 2,000 feet higher than this park. This resort has an altitude of about 8,000 feet, and has proven especially beneficial to a large majority of those who are suffering from pulmonary diseases. Malaria is unknown here, and this altitude is a sure specific for asthma and hay fever.

About one year ago the first improvements were begun, to make this one of the most popular resorts in the Rocky Mountains; and where at that time there was but one log hut, now may be seen one of the finest hotels in Colorado. This hotel will accommodate from 60 to 100 guests; has broad porches on three sides; a spacious dining room, and is in itself a model of beauty and art. The hotel is the property of the Green Mountain Falls Company, and to accommodate the tourists who flocked there last summer, they furnished 130 tents, with board floors and board sides, nicely carpeted, furnished with spring beds, etc., with kitchen furniture and all conveniences for housekeeping, and rented the same at a very reasonable price per month.

In this park are some thirty cottages which have been erected by the best class of Colorado Springs and Denver citizens for their summer homes.

The company have erected a fine large dancing pavillion in the midst of the park, and have succeeded in making the lake one of the most attractive sheets of water in the state. The lake is stocked with mountain trout, and is being constantly supplied with pure fresh water from the streams which flow in and through it, the water being so clear that the bottom is visible to the eye, and the finny tribe may be seen sporting about in the water, which would tempt even Ex-President Cleveland to again try his luck in the piscatorial art.

There are many points of interest about this delightful resort; such as Pilgrim Falls, Music Falls, Cable Falls, Bridal Veil Falls and innumerable canons, and just above the hotel site, following the stream to its source, has been arranged a picturesque lane, unequalled by even the famous "Lovers' Lane" at Manitou, and is so arranged with steps,



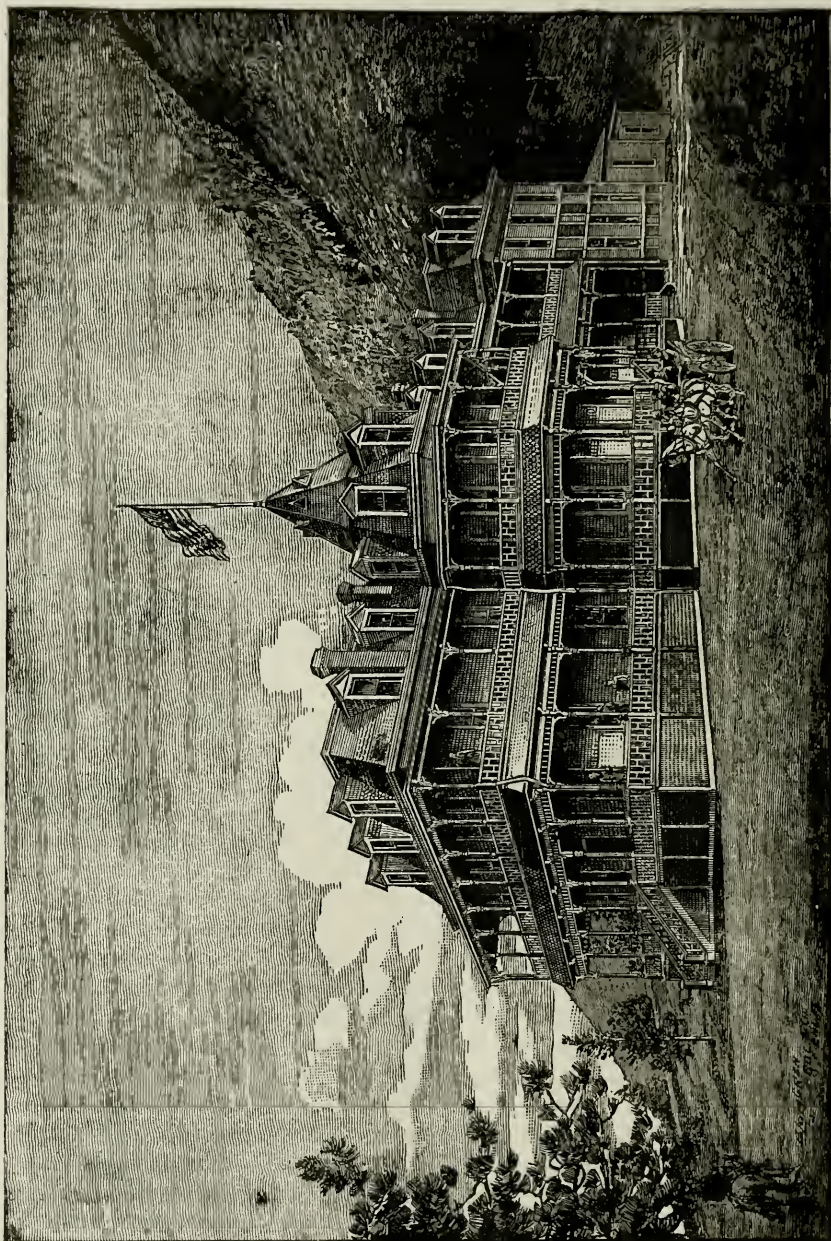
that the ascent is unmarked. At convenient distances we find seats arranged for the benefit of the weary pedestrian. When you have reached a point probably 1,000 feet higher than the hotel, the ascent then becomes more laborious, but the steps provided, makes the entire ascent comparatively easy, and when you have ascended still another 1,000 feet, you will find yourself upon a level plateau near the summit of Mount Esther, which overlooks the entire valley and affords to the beholder an unobstructed view of the town site and also of the famous Pike's Peak, which appears to be from one-half to a mile distant. And here begins a panorama kaleidoscopic in its ever changing forms and colors, the wonder of one who sees, the despair of one who wishes to tell others what he saw. In places the effect is that of giant. Vast bastions of granite, strata upon strata, rise to a stupendous height, braced by rock masses behind them infinitely greater. Suggestions of the Sphinx and of the Pyramids can be caught in the severe and gigantic turrets piled on every hand.

These are not made up of boulders, nor are they solid monoliths like those of the Royal Gorge. On the contrary, they are columns, buttresses, walls, pyramids and towers of stratified stone with sharp cleavage, presenting the appearance of clear cut masonry. But the kaleidocope is again shaken and the scene changes. The effect is startling.

From this point Colorado Springs may be plainly seen, also the plains for miles beyond. On the other hand, a magnificent view of the snowy range, eighty miles distant, may be had throughout some 200 miles of its course.

Half a mile distant, the carriage drive which leads to the summit of Pike's Peak is plainly visible nearly its entire length as it wends its winding way from near Green Mountain Falls to the summit of this mighty monarch, soon to be extended to this resort, and will place Green Mountain Falls nearer to the summit of Pike's Peak by carriage than any other railway station. The Colorado Midland Railway may be seen from this point as it merges from the canons, soon to be lost from view again, and again and again reappearing.

This enterprising Green Mountain Falls Company have now completed a building ninety feet front, known as Lake View terrace, which is near and overlooking the lake and convenient to the depot, and is designed to accommodate summer parties and tourists with home comforts, etc. It is intended to relieve the hotel from its overcrowded condition during the season, while the hotel proper, which is near by, has been erected at an expense of \$34,000, exclusive of furniture. This hotel is well furnished, has commodious sleeping rooms—ladies, and gentlemen's parlor, separate, and dining room with ladies' ordinary, larger and more complete than any of the Manitou hotels; it will be equipped with electric lights—in fact, all the modern conveniences, making it a model of excellence in every respect.



Hotel, Green Mountain Falls.



Just below the hotel are two cold springs, with pagodas surrounding them, both furnishing exceptionally pure water. Near the hotel in another direction is an excellent iron and sulphur spring, and between the hotel and the lake is a beautiful little park, with a fountain in the center. On the banks of the lake you will find a pretty boat-house, where the boats are kept for the use of the guests; the equipment of row and sail boats is unsurpassed in the West. Near the center of the lake is a small island, on which is a pavilion and band stand. Near one end of the lake is a fountain, which breaks up through the level surface of the lake and throws the water to a height of thirty or forty feet. On the edge of the lake is an iron spring, which is second only to the great spring at Maniton.

Arrangements are being made to accommodate the thousands of expected health and pleasure seekers who may come here during the coming summer. This resort may be reached by the Colorado Midland Railroad, from Colorado Springs. Accommodation trains will run between these points, making several trips each day, besides the four regular daily express trains of this railroad, and it is reported as having sold during last season, 16,000 tickets to this place, which was then scarcely known of, and only beginning to be improved.

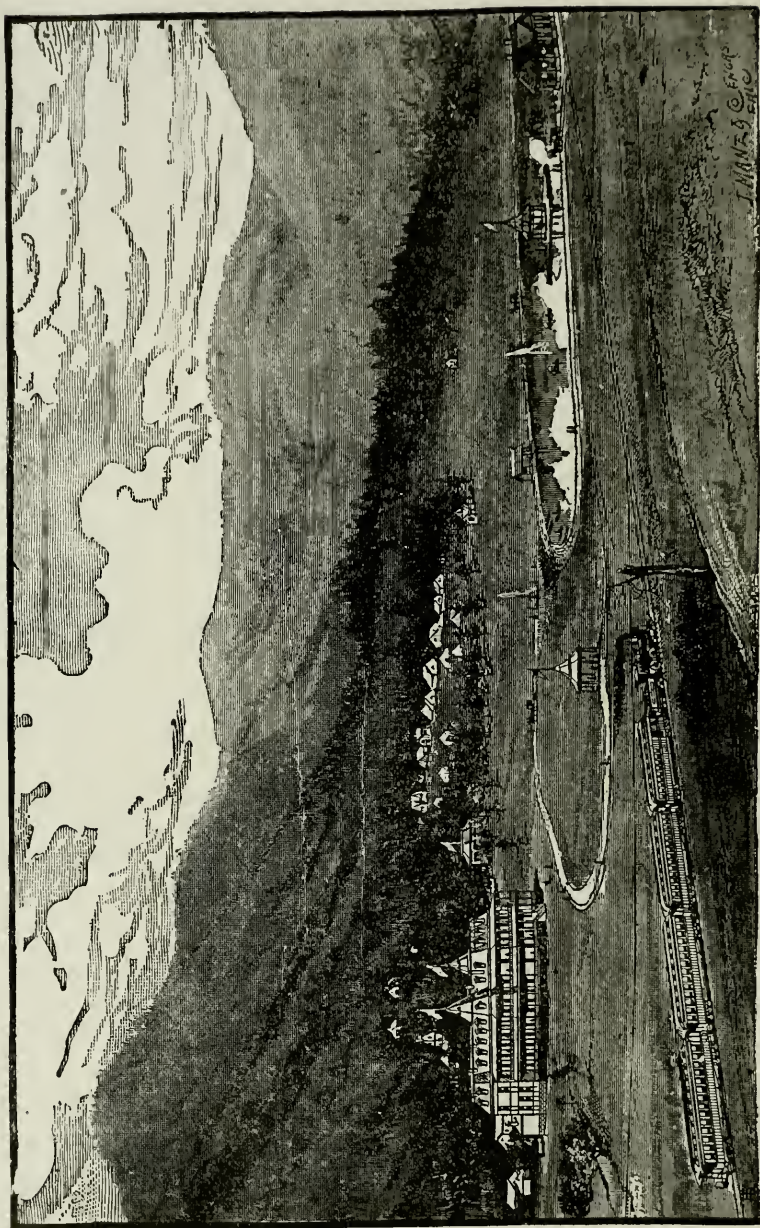
The Colorado Midland, in constructing their railroad through the Ute Pass, displayed some of the finest engineering skill that was ever accomplished in the world. Up as far as Green Mountain Falls, the road cost to construct, about \$162,000 per mile, there being nine tunnels in that short distance. It passes along the edge of the mountain at a height of from 500 to 1,000 feet above the bottom of the canon, appearing like a spider's web clinging to the sides of these massive stone walls. It is well worth a tourist's travel from the Atlantic to the Rockies to be enabled to ride over this fifteen miles of the most picturesque scenery in America.

The Green Mountain Falls Company have their office at this place, as well as at Colorado Springs, and they have 840 acres of land, which lies very beautifully for platting; they have also some 300 or 400 lots on the market for sale, at extremely low prices considering the advantages for building, etc.

There are several branches of business already represented here, and others soon to be established. The Baker Mineral Paint Company are operating near here, where they have the best bed of mineral paint in the West, putting up all kinds of paint, which are said to be of the purest kind. One, a red mineral, containing a large per cent. of oxide of iron, and used extensively for roofs, cars, bridges, etc., and for coloring mortar for fine brick work; and the other, a yellow ochre of excellent quality.

The Baker Mineral Paint Company's mines near Green Mountain Falls are now producing two valuable mineral paints that have not heretofore been found in any such quality or quantity in the West.





Bird's Eye View of Green Mountain Falls.

This company is composed of some of the best and most responsible citizens of Colorado Springs. They are amply able to make good their engagements; their characters are irreproachable. F. E. Dow, President and Managing Director, has resided in Colorado Springs sixteen years; came to that place from Olathe, Kansas, where he had been in the clothing business. He was engaged in the clothing business in Colorado Springs for eleven years; served as City Clerk and Treasurer for three years, and two terms as Mayor, the last term he had no opposition for re-election. He is now President of the Exchange National Bank of Colorado Springs; a good and highly esteemed citizen.

I. J. Woodworth is Secretary, Treasurer and Consulting Attorney for the company; has lived in Colorado Springs about one year; formerly lived in Sycamore, Illinois, where he was practicing law, and was Administrator of the Waterman estate, valued at \$1,000,000, and Captain Benjamin Page's estate, valued at about \$50,000, but was scattered all over the world. After having satisfactorily and in a business-like manner, closed up the affairs of the two estates above-mentioned, he came to Colorado.

For seven years he was Principal of the theoretical business department of the Jacksonville, Illinois, Business College, and for five years Principal of the same department of the Gem City Business College at Quincy, Illinois.

Charles Sprague, Manager, came to Colorado Springs one year ago, and was one of the organizers of the company, and the present excellent condition of the company is due to his able management. It was through his efforts that the present owners were induced to take hold of the enterprise, and place it upon a sound financial basis. Mr. Sprague is always in attendance at the Falls, and receives guests with his unsurpassed grace, and points out the numerous points of interest thereabout. He also has charge of the extensive improvements which the company are making. Mr. Sprague formerly lived in Olathe, Kansas, where he was Deputy Register of Deeds for two terms, and in the real estate business.

Messrs. Dow and Woodworth own about two-thirds of the stock of this company and are energetic business men, which assures the complete success of the enterprise:

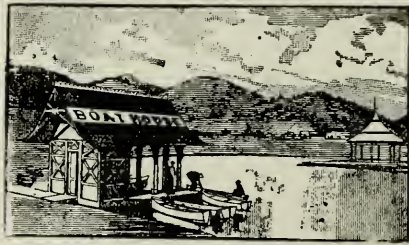
Green Mountain Falls Town and Improvement Co., 112 Pike's Peak avenue, Colorado Springs, Colorado,

OFFICERS—F. E. Dow, president and executive director; Dr. M. H. Smith, vice president; I. J. Woodworth, secretary and treasurer; Charles Sprague, general manager.

DIRECTORS—F. E. Dow, I. J. Woodworth, J. G. Garland, Charles Sprague, E. W. Sells, Dr. M. H. Smith and S. N. Nye.

REFERENCES—First National Bank and Exchange National Bank, Colorado Springs; E. E. Parker, vice president American National Bank, Kansas City.

The following named gentlemen are our agents for the sale of lots in Green Mountain Falls: T. H. S. Schooley, Grand Hotel, Pueblo, Colorado; A. Alloway, 111 East Eighth avenue, Topeka, Kansas; W. B. Henry, Olathe, Kansas; W. S. Tower, Carthage, Missouri; T. D. Walton, Seventh and Delaware, Kansas City, Missouri; Mr. Thomas L. Drake, office 1018 Seventeenth street, Denver, Colorado.



Lake and Boat House at Green Mountain Falls.



## MANITOU PARK.

THIS charming spot is situated twenty miles from Colorado Springs, up the Ute Pass, on the line of the Colorado Midland railway. The Ute Pass has been known for years to the freighters and occasional tourist as containing some very charming spots for a summer outing. The beauty not escaping the gross nature of the ordinary "bull wacker," and captivating the more refined nature of the tourist, so that twelve or fifteen years ago some enterprising individuals from Colorado Springs erected a fine hotel and cottages at a point six miles distant from the present Manitou Park; the railroad station being established about two years ago when the Colorado Midland had completed their construction as far out as this point. Here is destined to be erected another Colorado Springs, which will be to the resort six miles distant, all that the Springs have been to Manitou. The site for a city is unsurpassed in loveliness and grandeur. Here in the midst of the Creator's grandest handiwork is an elevated plateau, 8,500 feet above the sea level, surrounded by noble mountains, far enough distant to permit the sun to pour its rays into this valley, tempering the atmosphere in winter, and in summer forcing vegetation to the utmost limit of its propagation. It is in a veritable park, filled with natural flower gardens, and studded with stately pines and spruce, with clusters of shrubs, vines, etc., all of which contribute to the pleasure and comfort of the citizen, tourist or invalid. The elevation has proven especially beneficial to pulmonary diseases, asthma, hay fever and other throat diseases. It will attract thousands of people from the east who will make this their permanent home, and build up a city, combining the commercial with the health-giving qualities of the mountains, which will rival the now famous Colorado Springs. A large pavilion is being erected with a balcony on its top, from where an unobstructed view is afforded of three mighty monarchs of the mountains, snow-capped and glistening in the perpetual sunshine of this region. Pike's Peak, to the south only a few miles, Gray's Peak, 75 miles to the north, and Long's Peak, nearly 50 miles farther north than Gray's Peak; imagine an atmosphere so clear that the vision can be extended 125 miles without the aid of artificial lenses. Turning to the west, the snowy range, the "Back Bone of the Continent" is plainly visible; 60 miles to the nearest point, visible for more than 100 miles of its course, extending from north to south, resembling a silver cord studded with diamonds in its snow-white glistening beauty. Near the pavilion is a kitchen arranged and equipped for the accommodation of picnic parties, who also use the pavilion for spreading their lunch and for dancing, all free of charge. The management will provide, during a large por-

tion of the season, a band to dispense music for dancing, etc. Here we find the nucleus for a magnificent city. Two stores, restaurant and blacksmith shop, new depot is being erected, also a new commodious hotel building about to be begun, cottages projected, and arrangements being made to erect tents for the overflow of visitors expected this season. Leading down through the park, everywhere beautiful, is a delightful drive, which, with the original Manitou Park six miles distant, where a beautiful hotel is being constructed, in addition to the quite extensive accommodations which were provided there previously, and frequented for several years by a superior class of tourists, noted for its fine fishing, shooting and other sports, makes a beautiful park throughout, being well watered, beautifully constructed, and in that magnificent inimitable style that nature builds.

The projector of this grand enterprise of building up the New Manitou Park, is Mr. W. J. Foster, who came to Colorado Springs about eleven years ago and engaged in the newspaper business until about three years ago, when he embarked in the real estate business. His first large transaction in real estate was the launching La Verne, a platted tract of land which lies on Colorado Avenue, between Colorado Springs and Colorado City, being two miles from the center of the former city, and adjoining the latter. La Verne was placed on the market, (160 lots), in January, 1888, and within sixty days were all closed out at a handsome profit. Previous to launching La Verne, Mr. Foster had secured the land now platted and known as Green Mountain Falls, and after La Verne he took up the latter enterprise, which, through his indomitable will and usual energy, was successfully marketed. He meanwhile started the successful Green Mountain Falls Echo, a journal brought to superior excellence through his unaided efforts.

Mr. Foster is an excellent judge of values, and he avers that Manitou Park is, without exception, the best property he has as yet had any connection with; that it will prove a rapid seller, and make every investor a large per cent. upon the investment. The property is placed upon the market at exceedingly low prices, ranging from \$25 to \$200 per lot, and in addition, Mr. Foster is offering special inducements to early purchasers; he has set aside 100 lots, none of which are without trees, lots averaging a value of \$100 each. Most of the lots are 50 feet by 150 feet; some are cut a trifle shorter, owing to the lay of the ground; all are good building lots and desirable; on three of the 100 lots Mr. Foster erects, on one a handsome three-room cottage, on one a beautiful four-room cottage, and on another a six-room cottage; all are conveniently arranged in the interior, the four and six-room cottages being a story and a half each. The purchaser of a contract receives a number, which gives him three chances in 100, to get a lot with a cottage thereon for his \$100 invested, and one 100 chances in 100 of receiving a lot that is worth the money. The following receipt and con-

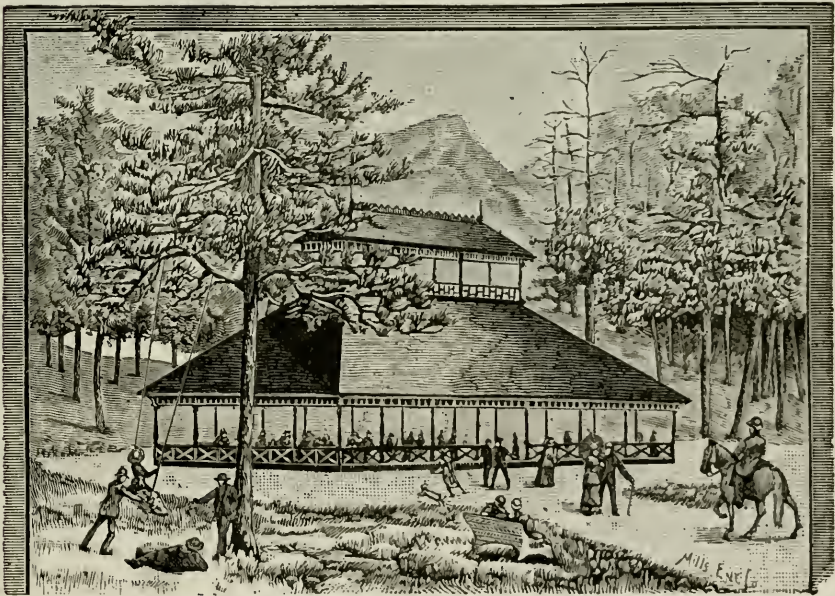


tract is given when the money is received, is duly signed, etc, and makes the conveyance as absolute as a deed: "In consideration of the sum of One Hundred Dollars (\$100), the receipt of which is hereby acknowledged, I agree to transfer by warrantee deed to John Doe, of Baltimore, Md., or order, one lot in Manitou Park, El Paso County, Colorado. The number and location of said lot to be determined at a lot drawing which will occur on or before August 1st, 1889, in Manitou Park, Colo. Each certificate stands one chance of drawing a lot with either a three-room cottage, a four-room cottage, or a six-room cottage on it."

The certificate is duly numbered and signed, and is absolutely safe. The high standing of Mr. Foster precludes any possibility of any element of unfairness. This plan is exactly similar to that adopted with La Verne, which place was mentioned before. The contracts were carried out in that instance to the letter, and many of the lots without improvements have been re-sold by the investors at a handsome profit. The plan meets with favor at home, and that is one of its greatest elements of strength.

Trains make four round trips per day from Colorado Springs to Manitou Park, besides the regular express trains, and makes this resort very available and desirable.

Persons desiring information regarding Manitou Park, address or call on W. J. Foster, Colorado Springs.



Pavilion at Manitou Park, recently erected by W. J. Foster.



## ASPEN.

PITKIN COUNTY, COLORADO.

JUST now Aspen is attracting more attention and eliciting more inquiry than any small city in the United States. This is directly due to the constantly recurring discoveries of extensive bodies of high grade silver-bearing ores; some of these are of such marvelous richness that they have eclipsed the best records of such famous mines as the Robert E. Lee and others of Lake County, which gave to Leadville its world-wide renown. The bulk of ore being shipped out has a value beyond that of Leadville mines, in proportion to tonnage, while the reserves being opened, promise, within the present year, to make the gross output approximate very nearly to that of Leadville. These accomplished facts, reinforced by the daily developments in both old and new properties, in all the widely separated districts of the country, are convincing mining men at home and abroad, that this is destined, within the near future, to be the richest and largest mining camp within the entire scope of the Rocky Mountains. Such being the outlook, there must of necessity exist a general demand for positive information about this locality in respect to location, climate, facilities for mining, and especially whether or not it possesses the requirements for comfortable permanent residence to a large and active population.

### LOCATION.

Aspen, the county seat of Pitkin County, is situated a little to the west of the center of the State of Colorado, on the western or Pacific slope of the Rocky Mountains. It is surrounded, except to the west, by lofty mountains, whose occasional peaks reach the clouds, and are constantly capped with snow, while the majority of the mines are far below timber-line, permitting their active development every day in the year.

### ALTITUDE.

Aspen City is most picturesquely located on a broad plateau, through which flows the beautiful Roaring Forks river, at an altitude of 7,700 feet, or only 2,500 feet higher than Denver.

### CLIMATE.

Sheltered on three sides by the mountains, high winds and prolonged storms are much rarer than in Denver, and bright warm days are more numerous than in the Capital city. The streets are broad,

rectangular and level, with abundance of room for any extension that the future increase of population may necessitate.

#### POPULATION AND FACILITIES.

The present population is about 8,000, and the city has efficient water works for fire and domestic purposes. Electric lights, an opera house, second in size and completeness only to that in Denver, and surpassing it in architectural beauty. There are two large banking houses, two flourishing public schools, seven churches; the various secret organizations are also well represented; two railroads, telegraph and telephone facilities; two large ore sampling works; large new brick hotel in process of construction, and a plethora of business houses of all descriptions.



The Loop on line of Colorado Midland Railway, near Hageman Tunnel.

#### WATER POWER AND USES.

The Roaring Fork River and tributary streams afford sufficient water power, which has been only partially utilized for water works, electric lighting and the transmission of electric power over wires, or for the operation of mining machinery. At no distant day power from this source will be furnished to all developed mines for many miles in every direction, thus affording most economical methods for the extraction and delivery of ores to the samplers and railway cars.

#### TRAM ROADS.

Already a tram road is in operation to one of the leading mines, sending down cheaply and expeditiously 150 tons per day, and con-

tracts for a cable road, from the edge of the city up the mountain side to Tourtellotte Park, a distance of about three miles, are about being let. This will reach, by main line and branches, all the producing mines of Aspen mountain, and greatly cheapen and facilitate the transportation of ores, and supercede the present costly and slow delivery of ore and supplies by wagon and jack-packing, over the steep and circuitous roads.

#### GENIUS AND ENTERPRISE.

From the above recital it is plainly evident that this community is surprisingly enterprising and progressive, because, ten years ago there was neither town nor mines here to disturb the solitude of this the huntsman's paradise. In that short interval these developments have been made, and two lines of railway—one a broad gauge—attracted and built over mountains before supposed to be barricades defying the skill and genius of railway engineering. The latest devices for rapid and economical mining and the best improved appliances for intelligent and comfortable living have found eager and willing advocates among the citizens of Aspen.

The reader's attention is particularly directed to the fact that Aspen is an orderly and well equipped city, with few of the rough features and elements which so many non-residents expect must of necessity characterize a thriving town in the Rocky Mountains. Aspen has many elegant private residences, and as cultured and progressive society as any city of its size in any of the older states of the Union. A peculiar feature is noticeable here which is not usually characteristic of mining towns, and that is, that the men who have grown rich in Aspen have almost, without exception, built themselves costly residences in this beautiful valley, instead of making their homes in other localities, and hence no one who may think of coming to this section for making profitable investments need hesitate through fear of being exposed to a rigorous climate or influences materially different from those to which they have been accustomed. Since the advent of the railroads Aspen is no longer a frontier town, and her citizens are not subjected to their former rough experiences, but, on the contrary, are surrounding themselves with all the comforts and conveniences of the most advanced civilization.

#### BUSINESS OPPORTUNITIES.

Considerable space has been devoted to an exhibit of the present status of the city of Aspen and the enterprise of its citizens for the purpose of disabusing the minds of distant readers of preconceived opinions which might have prejudiced them against the thought of permanent residence here. Believing this to have been satisfactorily accomplished, the next step should be a demonstration of the opportunities existing for other people to come here and reap financial benefits similar to those which have been so lavishly acquired by the pio-





HON. JOSEPH T CORNFORTH,  
Denver, Colorado.

Delegate to the Fort Worth Deep Harqor Convention.

See Sketch on next page.

## JOSEPH T. CORNFORTH,

LEADING FRUIT COMMISSION MERCHANT OF DENVER.

**J.** T. CORNFORTH was born in Macclesfield, Cheshire, England, on the 4th of July, 1839. The fact of his having been born on the anniversary of American Independence, probably accounts for his public spiritedness which we hereafter mention.

Mr. Cornforth came to America 33 years ago, and settled in the then Territory of Kansas, and there passed through the border ruffian troubles. He was then associated with his brother, Birks Cornforth, in the mercantile business, under the style of Cornforth Brothers; at the same time they were among the largest freighters crossing the plains. Joseph T. Cornforth made eighteen round trips between the Missouri River and the mountains before the Union Pacific was built, in charge of the firm's freight trains. His experiences with the Indians would fill a large volume, and would read more like one of Ned Buntline's stories than like fact, and might lead some of our readers into the belief that the Indians still held this Great West in constant terror. We therefore omit any further reference to that subject.

Mr. J. T. Cornforth engaged in mercantile business at Cheyenne, Wyoming, for some years; was burnt out, losing all of his accumulated wealth, which had cost him years of toil and hardship. He left Cheyenne in 1874, and moved to Denver, where he embarked in his present line of business—that of a wholesale dealer in foreign and domestic fruits, which has grown to a most extensive business, Mr. Cornforth supplying much of the country west of the Mississippi River with his special line of goods. In 1881 he was elected President of the Colorado and New Mexico Smelting Company. He was one of the principal organizers of the Board of Trade, and was the first president of that institution, afterwards consolidated with the Denver Chamber of Commerce. He was the most prominent organizer of the National Mining Exposition of 1882, was one of the directors and treasurer of that great enterprise, and was made trustee for the bondholders. Mr. Cornforth is a fluent speaker, and upon almost every public occasion he is called upon, and to his credit it can be said, he generally responds, and has something to say worth listening to; he is frequently quoted by the press of the country. He is well informed upon almost all subjects pertaining to the welfare of Colorado. He was a delegate to the Fort Worth Deep Harbor Convention in July last, and subsequently to the Inter-state Deep Harbor Convention held in Denver. He is a large stockholder in the New Mexico Mica Mining Company, has large property interests in Denver, and owns a handsome residence in a fashionable quarter of the city.



J. E. FREEMAN,  
President Chamber of Commerce, Aspen, Colorado.

See Sketch on next page.



## J. E. FREEMAN,

PRESIDENT OF THE CHAMBER OF COMMERCE, ASPEN, COLORADO.

THE gentleman whose picture is on the preceding page is a native of the State of Vermont. The first thirty-six years of his life were spent in that state, with the exception of four years, which were devoted to the service of the United States in the late rebellion. After reaching manhood, he devoted his time to farming, manufacturing and merchandising. Becoming dissatisfied with the quiet and slow methods of business matters in the East, he turned his attention to other fields of operation, and gradually worked westward, until April, 1880, found him among the few early pioneers crossing the range on snow shoes, and pulling his sled, which was laden with blankets, provisions and tools, searching for the land which rumor said was destined to become one of the greatest mining sections of the world. Since that date he has been identified with its interests, and has done his part towards the development of this country, and has become largely interested in mining properties as well as real estate, having, through steady purpose and unceasing energy, become one of the substantial business men of Aspen. Mr. Freeman is at the present time engaged in handling mining properties upon a large scale. He is one of the most influential and substantial citizens of the prosperous City of Aspen, owing to which fact he was elected President of the Aspen Chamber of Commerce.



GEN. W. T. CLARK,

Denver, Colo.

General Agent Equitable Accident Association.

## GENERAL W. T. CLARK,

BORN in Norwalk, Connecticut, 1834; received a common school education in New England and New York City; taught a public school at the age of fourteen, with the usual experience; while in this occupation he conceived the idea of graded schools, which he announced in the first convention of teachers held in Connecticut; has always been an enthusiast in popular education. After completing his education, read law and was admitted to the bar of the Supreme Court at Newburg, New York, October 2nd, 1855. Taking Greeley's advice, to "Go West, young man," he landed in Davenport, Iowa, December 16th, 1855, and commenced practice of law in the office of Hon. John F. Dillon; was in full and successful practice there when the war broke out in 1861. He enlisted as a private and went to the field as Adjutant of the 13th Iowa, and was engaged in all of the campaigns in Missouri. He was identified with the Army of the Tennessee, under Grant, Sherman, McPherson, Logan and Howard, its five commanders, from its organization to its muster-out in 1865; he was in every skirmish and battle of that army, from Belmont, November 17th, 1861, to Bentonville, North Carolina, March 19th, 1865—101 battles and engagements. He received the Vicksburg medal of honor, being one of nine. During his service he was promoted successively by the President from Captain to Major-General, commanding a division at the close of the war. He was the personal friend of the brilliant McPherson, whose Adjutant-General he was from the day he received command of the troops in October, 1862, until the day of his death at the battle of Atlanta, July 22nd, 1864, being Adjutant-General respectively of a division, the famous 17th Army Corps, and the Adjutant-General and Chief of Staff of the Army of the Tennessee, and has a larger personal acquaintance in that army than any living man, except General Sherman.

In 1865 General Clark was ordered by General Grant to the Rio Grande, Texas, in command of a division in the Army of Observation on the borders of Mexico. The French abandoning Mexico in 1866, General Clark the following year resigned from the army and engaged in business as a banker in Galveston, Texas, organizing the "National Bank of Texas."

Re-construction coming on, General Clark took an active part in these measures, having accumulated a fortune which he freely expended in the success of those measures. He was elected to Congress from the Galveston district in 1868, with the largest majority of any mem-

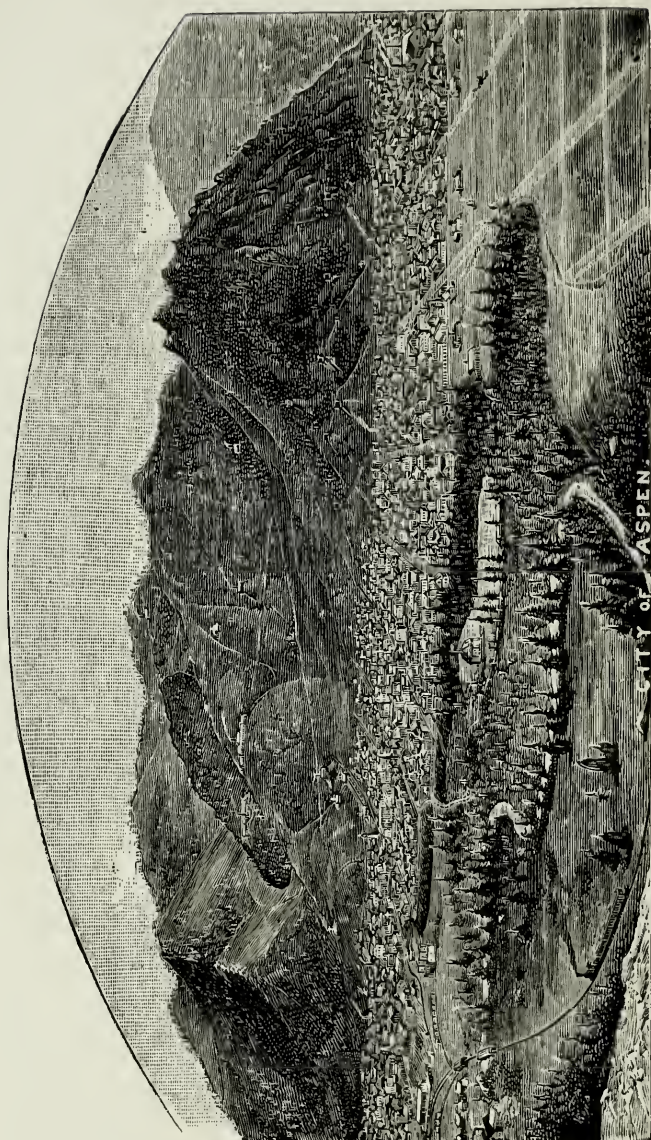


ber from that state; was re-elected in 1870. During his service he was assigned by Speaker James G. Blaine to the committee on commerce, and secured for Galveston the first appropriation for deep harbors, which has continued and resulted in the united action of the entire West in the interest of deep harbors on the Texas Gulf Coast. General Clark was also on the committee of public education and civil service, which introduced the first resolution in the House upon that subject, from which the present system has grown.

After the expiration of his second term in Congress, he was postmaster at Galveston for two years; he was special agent and chief clerk of internal revenue until 1884, when he resigned, and took up journalism in Fargo, Dakota, where he remained two years, until frozen out and burnt out. The General then looked about for a desirable place to reside and engage in business. He naturally turned to Denver, where he has since resided. He embarked in the real estate business, and was instrumental in the organization of the Real Estate Exchange. Upon the organization of the Equitable Accident Association, General Clark became the general manager, and owing largely to his energy and perseverance, the association has achieved a phenomenal success, and is one of the leading accident insurance companies of the country.

Like Major Powell, of the Geological Survey, he believes Denver will be the fourth city in America ere many years, and Colorado the greatest agricultural state in the Union.

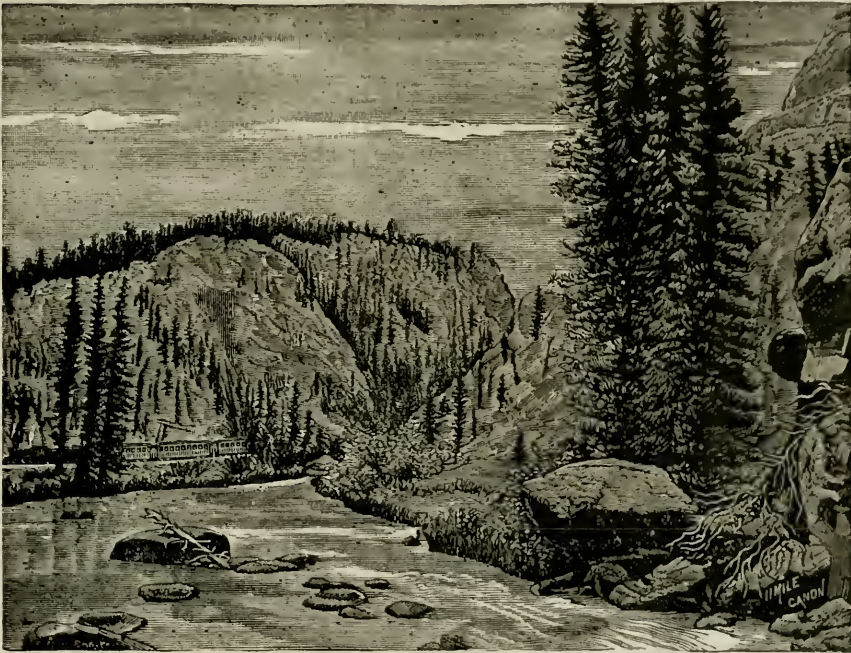
General Clark is a cultured gentleman, a hard student, a man of marked individuality, a thorough business man, generous to a fault, and an uncompromising friend.



Terminus of the Colorado Midland and Denver and Rio Grade Railroads.



neer population. The chief occupation of this people is mining for the precious metals, all other business enterprises being dependent upon and intimately interwoven with mining. That this industry is in its infancy needs only consideration to be convincingly proven, and this will be conclusively shown under the head of "The Mines of Pitkin County" later on in this article. The grand extent of the mineral bearing area, as shown by partial development, is positive evidence that there are hundreds of mines remaining to be developed for every one that is now producing, and in this fact lies the inducement for newcomers to engage in this industry. This great area of



Eleven Mile Canon on line of Colorado Midland Railway.

valuable mining ground is only partially prospected, and thousands of acres are open to location by prospectors. Even in the sections which are most thoroughly covered by locations there are constantly recurring new discoveries of pay ore where other miners supposed it was useless to look for mineral. The ground that is held under assessment work in proximity to productive properties can, in most cases, be acquired at reasonable figures or interests secured by the furnishing of capital for development. Leases on the most promising claims are daily being secured from owners by parties who, for specified periods of time, have working control of the property. Hundreds of men have acquired fortunes in a short time in this manner, and there are yet



abundant chances for new men to secure as good ground and as valuable interests as though they had arrived with the pioneers and endured all the hardships they did to acquire possession:

#### THE EXPLORED PORTION,

Up to within a comparatively recent period, the producing mines of the camp were all within a distance of two miles, just in the vicinity of Aspen, but the past year has carried the line northward, to the top of Smuggler mountain, and southward to Tourtellotte, the portion of the contact which may now be said to be embraced in the producing area, being three and a half miles in length. It will readily occur to anyone that three and a half miles is but a very small portion of 40 miles, and it may be stated here that these figures pretty accurately represent what Aspen is, and what it has a fair possibility of becoming as a mining camp, while other districts in the county, to be spoken of further on, will far more than make good any unprofitable sections of the contact that might possibly be developed.

#### SOME OF ASPEN'S MINES.

Space will not admit of any extended descriptions of the mines that have been opened within the three and a half miles spoken of above, and the following review of the list will convey some idea of their importance:

Commencing on the north is the Park-Regent. This is a mine that was opened a little over a year ago. From the 1st of May, 1888, to the 1st of January, 1889, it paid \$240,000 in dividends, and its shipments are steadily maintained, with great reserves held back.

The J. C. Johnson, next south, has been steadily paying dividends for more than three years, and has nearly 4,000,000 in sight now.

Next is the Smuggler, which has produced great quantities of silver and lead, and has bodies of ore standing untouched, that are from 30 feet to 40 feet in thickness. Five dollars a share have recently been offered for stock of the company, the capital stock being 200,000 shares.

The Mollie Gibson, still farther south, is the wonder of the state. It produces ore in large quantities that is worth \$4,000 per ton, while a concentrating mill is kept running on the product from its low grade ore body, which is 30 feet thick.

Crossing the valley to Aspen mountain, the Enterprise property is met with. It has for a long time been a regular dividend-payer.

The property of the Aspen Mining and Smelting Company produces heavily, and pays a dividend of \$40,000 per month, with its stock standing at \$11.50 per share, the capital stock being 200,000 shares.

Next comes the Aspen mine, which for a length of time has been paying dividends of \$100,000 per month, and which has ore enough in sight to continue them for two years, with a great area of territory not yet prospected.

The Compromise Company's property, near by, shows the largest ore body in the world. It is some 400 feet long and 150 feet thick, the average value being close to \$80 per ton.

The Bonnybel is just over the ridge, and from its stopes a half million dollars have been taken.

Further south are the Ruby, the Little Percy, the Ingersoll, the Best Friend, the Camp Bird and the Libbie Bell, all of which are pay mines though none rank yet as great bonanzas.

Passing further south we come into Lourtellotte Parke, now a wonderfully busy place, but until within six months a neglected and mistrusted section. Here are to be found the Edison, producing \$75,000 a month; the Celeste, with a production of about the same amount; the Last Dollar, a larger mine than either of those just mentioned; the Silver Bell, with remarkable bodies of ore showing; the O. K., now a regular shipper of large quantities of mineral; the Carbonate Chief, a recent but valuable discovery; the Lottie, a steady shipper; the Highland Light, a most valuable property; the Oakland No. 2, that has just struck pay; the Little Rule, a producer of rich ore, and the Sam Houston, that has just struck a large body of very high grade mineral.

#### THE FUTURE OF ASPEN.

The above list of pay mines that lie in the developed district (and many small producers are not mentioned), will suggest the idea that as a mining center Aspen has no equal, and that the opportunities for mining investments in the district are unequalled. There are more than 30 miles of the mineral belt, part of it northward and part of it southward, that only needs development to stud it as thickly with mines, as the mines are dotted over Aspen mountain. Great opportunities are afforded, and they are rapidly being seized upon.

Besides the resources of this great lode, there lie tributary to Aspen other rich districts. The Maroon Creek district is producing ore regularly, and is most promising in every respect. The fissure veins in Conundrum gulch and about Ashcroft are almost numberless, and are known to be rich. In Lincoln gulch there are rich leads; at Independence there are highly valuable gold mines; on Snow Mass the finest of copper ore is found, and on Rock creek there is another extensive contact country, in which important developments are continually being made.

Thus are given briefly the facts upon which are based the prosperity of Aspen, and upon which is founded the proud and confident boast of her people, that they have the richest county in all the broad domain of the United States, a county in which more fortunes will be made than in any other ten counties of the West, and in which prosperity will continue for many generations.

## AGRICULTURE, COAL, IRON AND MARBLE.

Aside from her wonderful mineral deposits, Pitkin County is rich in agricultural resources and in coal, iron and marble. The entire valley of the Roaring Fork and its many tributaries are susceptible of irrigation, and this means rich crops of all the cereals, vegetables and hay, which find ready cash markets at profitable prices among the miners. A considerable portion of arable land is still available for occupation through the construction of ditches to reach the higher portions yet unoccupied. The numerous ranchmen are all in comfortable circumstances, and their properties are seldom offered for sale. The southern portion of the county about Ashcroft has immense bodies of iron of merchantable character, and the western portion has coal beds of vast extent, and this is known to be of the best coking variety. The marble beds are almost unlimited in extent, but have not yet been utilized, although samples show it to be of superior quality. The railroad has reached the coal fields, and will probably be built to the iron and marble deposits in the near future, so that these vast native resources may contribute their quota towards making famous and prosperous this county, so wonderfully favored by nature.

## CORRESPONDENCE SOLICITED.

Parties desiring more complete information than is herein given are invited to correspond with the Aspen Chamber of Commerce, and their inquiries will meet with prompt and cheerful attention.

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THE MINES OF PITKIN COUNTY.

THE great Aspen lode or contact has become the marvel of the mining world. Upon this lode the most phenomenal discoveries have recently been made, while vast amounts of ore have been produced and are being produced from the older mines that are located upon it. The beautiful city of Aspen has been built up upon the mines that were opened in the early history of the camp, and now the developments that are going forward promise to make of it the greatest mining metropolis that has ever been known.

To understand the importance of the developments that have already been brought about in their relation to the future of the district, it is necessary to give an idea of the extent of this mineral belt, to point out the small proportion of it that has been explored, and to pass in review the very large number of astonishingly rich mines that are comprised within the developed area.

## THE GREAT LODGE.

This lode is known to be some forty miles in length; it is a contact in lime formation and is represented upon Hayden's chart by the line of Silurian upheaval and outcrop. The contact between the



lower line, known as magnesian lime or dolomite, and the overlying stratum of pure carbonate of lime, known as blue lime, is the mineral bearing zone. Opinions differ at some points regarding this, but, in a general way, the statement is sufficiently accurate for the purposes of this article.

This contact between these two limes has been traced in a north and south course entirely across Pitkin county, a distance, as before stated, of about forty miles. Development was begun on the mountain sides near Aspen, and there the mining operations of the district have mostly been carried on. The result has been, that a number of mines that rank among the largest in the world have been opened there. It has long been known to those who have examined and prospected other sections along the contact that it was at all points fully as rich as at the points where the bonanza mines have been opened. It has been a little hard to convince those who would not investigate for themselves that such was the case, but recent developments, both northward and southward from the section in which the old mines are located, have established great faith among all mining men in the entire stretch of the belt.



BIRD'S EYE VIEW OF SALIDA, COLO.,  
Division Headquarters of the Denver and Rio Grande Railway

## SALIDA.

THE city of Salida is situated upon the line of the Denver & Rio Grande Railway and on the Arkansas River, in a beautiful broad valley, in marked contrast to the Royal Gorge, which must be passed in order to reach this lovely spot. The Royal Gorge for years stood an impassable barrier to the onward march of steel, and hung over this delightful valley like the flaming sword which has shut out from the Garden of Eden the descendants of Adam and Eve, lo! these thousands of years. The Denver & Rio Grande, the "Little Giant of the Rockies," broke through this seemingly insurmountable barrier, and, with a thread of steel, drew to this "Gem City of the Mountains" a class of citizens of sturdy character, energy and grit, who have built a city of growing importance and beautiful to behold.

In 1880 the city of Salida was incorporated, and now, at less than ten years of age, fully 5,000 people find delightful homes within the city limits. Here are situated the division shops of the Denver & Rio Grande Railway, the employees receiving monthly about \$40,000, which turns considerable ready cash into circulation. Rich silver and copper mines surround the city on every hand; some are being actively operated. Large charcoal kilns are near at hand and form no inconsiderable part of the business of Salida, twenty car-loads per day being shipped to Leadville and Pueblo. Salida is admirably situated to make a remarkably good smelting point; charcoal being made here upon such an extensive scale would be sufficient to supply a large smelting plant. All ore which reaches Pueblo must pass through this point, paying heavy toll for the extra 100 miles' haul. Coal has lately been discovered near Salida, which may prove valuable for smelting purposes. With the establishment of smelters here, it is not certain but that several stacks could be profitably run upon the ore that would be mined within a radius of five to ten miles; low grades that are not of sufficient value to bear heavy freight charges would thus be made productive and a general stimulus would be had in the precious metal mining about Salida.

As a place of residence few equal, and none surpass, this beautiful city. On every hand are found evidences of wealth, culture and refinement, such as large costly brick and stone residences, business blocks, churches and schools. In every respect are the public improvements and conveniences equal to any eastern city of like size. Here we find a splendid system of waterworks, which receive their supply of pure cold water from the Arkansas River above the city,



conveyed from that river into a large reservoir a mile and a half from the city, and from there into and through the city by large iron mains, with a water pressure of sixty pounds to the square inch, affording excellent facilities to check or extinguish any fires that threaten the city.

The city is brilliantly illuminated by electricity; most of the business houses and some of the residences are supplied with incandescent lights. Salida, as a sanitarium, is attracting more attention each year, and tourists and health seekers are making this place one of their objective points, upon reaching the state. Salida has been too modest during the past, and not outspoken as it should be, regarding its many really superior advantages, both as a summer and winter resort. We enumerate some of the natural attractions of this favored spot:

Almost within the city limits is Pedestal Bowl, a sight that should not be missed.

Seven miles from town is The Crater, certainly an extinct volcano, for the walls, 200 feet high, are there, composed of a white-grey substance, and almost round. The mouth is filled with an ashes-like formation. It is a field for wonder, for admiration and for study, and altogether a rough road that is well worth traveling.

Salida has over 200 miles of beautiful drives within a radius of 20 miles. That is to say, one can drive 200 miles and not go over the same ground twice, and still not be farther than 20 miles from town. All of this immense mesa is crossed by numerous streams, all springing from the recesses of the mountains beyond.

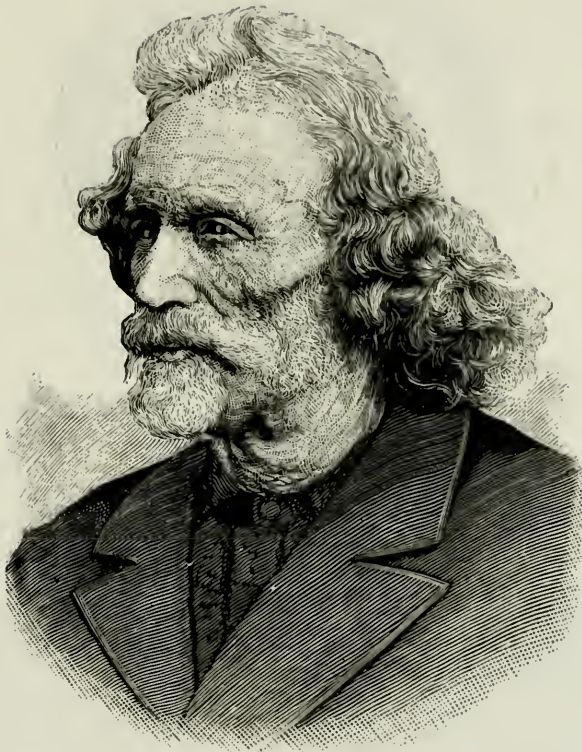
The many objects of interest in this immediate vicinity are easily reached by these picturesque drives. The world-renowned Pike's Peak rises to the height of 14,447 feet. The following peaks shut in the horizon with their majestic grandeur:

Ouray .....	14,147	Princeton .....	14,198
Shavano .....	14,239	Yale .....	14,187
Antero .....	13,245	Harvard .....	13,375

#### POINTS OF INTEREST.

The Garden of the Gods, two miles below town, is well worth a visit from the tourist,

The Poncho Hot Springs are five miles by rail southwest of Salida, and 55 in number, all issuing from a mass of tufa, or the natural concretions formed from ages of exposure, and of the same chemical nature as the tufa of the world-renowned Arkansas hot springs. The waters are almost exactly identical, and the temperature nearly alike, varying in each case from 90 deg. to 180 deg.



JIM BAKER.

Famous Frontier Scout, now living near Denver, Colo.

Jim Baker, famous as a scout, hunter and trapper, for half a century on the plains and in the mountains; was with Generals Harney, Fremont and Governor Gilpin in their early expeditions. He is about 80 years of age, and is the oldest living scout.



WILL C. FERRIL,

Familiarly known as the "Judge."

On the staff of the Denver Republican, and special correspondent  
of the largest New York and St. Louis dailies.



## CHAPTER XIV.

ONE OF THE OLDEST FAMILIES WEST OF THE MISSISSIPPI RIVER. A GRAPHIC  
DESCRIPTION OF THE HARDSHIPS ENDURED IN BUILDING  
UP THE GREAT WEST.

## WILL. C. FERRIL.

**W**ILLIAM COLUMBUS FERRIL, who for nearly ten years has been connected with the Colorado press, comes from a family that, for over 100 years, has been prominent on the American frontier. Among the early settlers of Kentucky were the Ferrils, who went from Virginia in company with the Cooks, to whom they were related by marriage, and other families of the Old Dominion. In this party was the family of Jonathan Ferril, his great-great-grand father, and all the Ferrils, except two of his brothers, who were left in Virginia. When in camp near Crab Orchard, Kentucky, the Ferrils were all massacred by the Indians, except two. In the darkness of the night John Ferril, a boy about 10 years of age, and his mother, son and wife of Jonathan, eluded the savages and made their escape. These two were the only survivors of the Ferrils who had crossed over the Alleghany mountains from Virginia, and is one of the most thrilling stories of the adventures of the Long Knives, as the Virginians were called by the Indians in the early annals of Kentucky. This ten-year-old lad—John Ferril—who was a Virginian by birth, was the great-grandfather of the subject of this sketch. John Ferril married Miss Keziah Boffman, daughter of James Boffman, of Kentucky. She was also a near relative of the Rev. Valentine Cook, the famous Methodist orator of Kentucky. Somewhere between the years 1807 and 1810, which was soon after the Louisiana Purchase, from France, John Ferril and family were among the Virginians and Kentuckians who followed the Daniel Boone migration to Missouri, and located in what is known as the Boone's Lick Settlement, in Howard County. Missouri was then Upper Louisiana, whose western boundary extended to the Rocky Mountains, and included where Denver now stands. The Boone's Lick Settlement was among the most famous made west of the Mississippi River. From 1812 to 1816, these pioneers from Kentucky and Virginia were compelled to reside in forts, and lived under a kind of Patriarchal form of government. They were only about 125 miles from St. Louis, but that town was then only a village, and was too far away to send assistance, and for four years these heroic frontiersmen fought their own

battles, and lived in forts to protect their families from the Pottawattomies, Sax and Foxes, Miamis, Kikapoos, and other hostile tribes. Every man, and boy too, who could level a gun, was a rifleman.

John Ferril helped Captain Cooper to build Cooper's fort, in Howard County, Missouri, where they and other families lived during those Indian wars.

John Ferril's family consisted of himself, wife, five sons and a daughter, viz.: Henry Ferril, Jonathan Ferril, William Ferril, Jesse Ferril, Jacob Ferril and Margaret Ferril. As an illustration of the dangers to which those pioneers were exposed, the following incident will show: One dark night an Indian stole stealthily up to Cooper's Fort, and, forcing his gun through an opening he had made in the logs, killed Captain Sharshell Cooper, one of the bravest pioneers of the West. Captain Cooper was sitting by his fireside, holding one of his children in his arms, when there was the quick, sharp report of an Indian's rifle, and Captain Cooper fell dead on the floor, but the child was unhurt. Cooper's Fort was to the early settlements on the Missouri River what Bent's Fort was many years later to the pioneers of the plains and Rocky Mountains. Near Cooper's Fort was founded Old Franklin, whose site is now the bottom of the Missouri River, and which in early days was the eastern terminus of the old Santa Fe trail, but which in later years was changed to Independence and Westport, and later also to Kansas City and Atchison. Among some of the first on that old trail were members of the Ferril family, and one of the most noted among them was Jesse Ferril, who for many years had charge of escorts on the Santa Fe trail in the early days of its history. He had many thrilling adventures and fights with the Indians on the plains, and, later, served in the Mexican war.

In the Boone's Lick settlements of Howard County, Missouri, was started the first emigration towards the Rocky Mountains, as it was the beginning of the old Santa Fe traffic, when Fremont and Gilpin were babies in their cradles. Kit Carson, so famous on the western trails in later years, who was born in Madison County, Kentucky, in 1809, was taken to Howard County, Missouri, when one year of age. The rifles of the Coopers, Ferrils, Ashcrofts, Hancocks, Berrys, Thorps and others not only protected their own firesides, but that where Kit Carson slept in his cradle as well.

Keziah Ferril, the great-grandmother of the subject of this sketch, was one of the oldest survivors of the first settlers in Howard County; she died in Miami, Saline County, Missouri, which town was founded by her son, Henry Ferril, in her nearly 100th year; she was one of the most noted women of Missouri, and many are the stories that are told of her nerve and courage in the Indian wars. Many are the incidents she has told her grandchildren of the days of Daniel Boone and the hardships of the pioneers of Kentucky and Missouri. She was a fearless equestrienne, and, after she was fifty years of age,

thought nothing of taking an occasional trip to Kentucky on horse-back.

William Ferril, the grandfather of William C. Ferril was born in Kentucky, in 1798, and was a boy only about 12 years of age when Cooper's fort was built. He was the Rev. William Ferril, for many years a Methodist minister in the Missouri conference. His son, the Rev. Thomas Johnson Ferril, the father of William C. Ferril, was born at Independence, Missouri, in 1831, and is still a member of the Missouri Conference of the Methodist Church, and is now the only active member remaining of that conference when it included the states of Missouri, Kansas, Arkansas and Texas. The Rev. William Ferril married Miss Elizabeth Clemens, daughter of Thomas Clemens, of Kentucky, and located at Independence, now a suburb of Kansas City, many years before the latter city was thought of. Independence was then the frontier town on the border of the Wild West, where the freighters outfitted for the Santa Fe trail. The Rev. William Ferril helped to drive the Mormons out of Independence. He, and John M. Chivington, who was later known as the fighting Methodist parson in Colorado, were members of the Missouri Conference of the Methodist Church when the slavery agitation began, and afterwards braved the mob and threatened violence of that period. A short time before his death, in Cass County, Missouri, a crowd of about fifty men came to the residence of the Rev. William Ferril to mob him, or drive him out of the state, because of his loyalty to the Union. He stood on the porch, rifle in hand, to meet them, but they did nothing more than to make threats. Some of the Younger Brothers, Jesse James and others happened to be in the vicinity and heard of it. They hastened to his residence, and calling him out told him that he could live there in peace as long as he wished. One of them, whom some have thought was Dick Mattox, a Lieutenant of Quantrells, said, "Parson Ferril, you have performed the marriage ceremony of the fathers and mothers of this neighborhood; buried our dead and preached their funeral sermons, and we will give orders to have you left alone." He was thus permitted to live and die in peace, and on his tombstone, in the country church yard, his children have placed the following inscription: "He was loyal to his country and to his God." The most of the Ferril family sympathized with the South, and fought in the Confederate army. The Rev. Thos. Johnson Ferril, though was an exception, for he was a prominent free-state preacher in the border-ruffian days of Kansas. His cousin, Hiram Ferril, a son of Henry Ferril, was a Lieutenant-Colonel in the Confederate service with General Marmaduke, and was often commended by him and Gen. Joe Shelby for gallantry on the field of battle. The grand-children of those pioneers of 1807-10 fought in both armies in that great conflict. The Rev. T. J. Ferril preached the first Methodist sermon in Lawrence, Kansas, and before the next Sabbath the old sod church was torn down, and the first time the people of Lawrence,



Kansas armed themselves against the border ruffians was to defend the home of the Rev. T. J. Ferril, whose loyalty and fearless support of the Union greatly aroused the pro-slavery element. This event was on the 30th day of September, 1854. John Speer, the fearless editor of the Lawrence *Tribune*, and Governor Robinson, gave the warning, and helped to supply the rescuing party with arms. The border-ruffians were already preparing to attempt to carry out their threats, when the rescuing party arrived, and thus he was saved from the mob. After that he was often threatened with violence, but was never injured. His family for four generations had been schooled in the hardships and dangers of the frontier that developed courage. He had also been fortunate in his early training, for in his childhood he had been cared for by a step-mother, the niece of the Rev. J. B. McFerrin, for many years the editor of the Nashville *Christian Advocate*, and she was a woman of strong character and great influence. By inheritance and early education came just that courage that was needed in the border-ruffian days, for many times both in Kansas and Missouri his life was in danger. He was a member of Judge Lecompte's famous grand jury, and with a few others voted against finding indictments against the loyal leaders in Kansas, in that heroic struggle. But their votes were of no avail, for the pro-slavery influence was then predominant.

He was at one time Chaplain of the Masonic Grand Lodge of Kansas. When the war broke out he was made the Chaplain of the 16th Kansas Cavalry; served in the Price raid, and was in the battles of the Blue, Pea Ridge and Prairie Grove. "How are Hiram Ferril and my other cousins!" he asked of General Marmaduke, when the latter was captured. "Hiram and all the rest of the boys were doing well when I saw them last," replied General Marmaduke, who later became the Governor of Missouri. After the Price raid he served with his regiment on the plains fighting the Indians. He was stationed at Julesburg, Fort Laramie, and was in the Sully expedition up north. As an evidence of his prominence in the border-ruffian troubles, when Quantrell burnt Lawrence, his men searched through the town to find him.

On February 14th, 1854, the Rev. Thomas Johnson Ferril was married to Miss Minerva Hornsby, who was born in Rhea County, Tennessee; she was the daughter of Brinkley and Esther A. Hornsby, early settlers in Johnson County, Missouri. Her people came from the Carolinas and Tennessee. Of this marriage was born William C. Ferril. The "William" is for his grandfather, the Rev. William Ferril, and the middle name, "Columbus," is for Columbus Hornsby, his mother's brother, who was one of the prominent free state men of Kansas, and was one of the first merchants in Lawrence; was also one of the founders of Emporia and a member of the House in the Legislature of Kansas that President Franklin Pierce had dispersed at the point of the bayonet.

Columbus Hornsby organized the first Masonic lodge in Lawrence, Kansas; he was a schoolmate of George W. Miller, Judge of the County Court, Denver, and Senator Cockrell, of Missouri, at Chapel Hill, that state. He died during the war at Lawrence, where his widow, who was a Miss Elmira Wormley, of Corning, New York, before her marriage, survives him; she, her sister and brother-in-law, ex-State Senator Alonzo J. Worden, of Kansas, were all schoolmates of Senator Henry M. Teller in New York, and were prominent workers in the free state cause.

William C. Ferril was born in Lawrence, Kansas, August 28th, 1855; his mother died when he was very young, and his early home training devolved upon his stepmother, who was a Miss Cleopatra E. Lynch, of Virginia; she was a sister of John T. Lynch, a member of the House in the Colorado Legislature when that body met at Golden as the state capitol, and who was later postmaster at Salt Lake City. William C. Ferril is a graduate of Lewis College, Glasgow, Missouri, and also of the North Missouri State Normal School at Kirksville, that state. In 1876 he was principal of the Bentonville, Arkansas, High School, which numbered 300 students; he then read law in the office of James H. Berry, the present United States Senator from Arkansas.

Mr. Ferril then studied law with Peak & Yeager, Kansas City, and soon after, starting out for himself in the law, he came to Colorado, owing to ill-health. He roughed it in the mining camps till his health was restored, then drifting into journalism; he was employed on the *Silver Cliff Miner*, and later was city editor of the *Silver Cliff Daily Republican* and also the *Daily Prospect* at that place. In 1882 he was one of the proprietors and editor of the *Silver Cliff Daily Herald*. In 1883 he came to Denver and was employed on the staff of the *Denver Republican*. From the spring of 1885 till March, 1887, he was the city editor of the *Denver Republican*; he then went to the *Rocky Mountain News*, and for nearly a year was city editor of that paper; he then returned to the *Denver Republican*, where he is now employed. Since 1884 he has been the Colorado correspondent for the *Kansas City Journal*. In 1885 he became correspondent for the *New York World* and, a little later, for the *St. Louis Post-Dispatch*. For those papers he has written many letters, that have been published in their Sunday issues. Mr. Ferril is also on the staff of Bachelier & Co., the leading newspaper syndicate of New York City; through this syndicate he has also published western sketches in the *New York Mail and Express*, *Brooklyn Times*, *Philadelphia Press*, *Chicago Herald*, *Chicago Times*, *St. Louis Globe-Democrat*, *Savannah (Ga.) News*, *Louisville Courier-Journal*, *Kansas City Journal*, *Denver Republican*, *Galveston (Texas) News*, *Dallas (Texas) News*, *Portland Oregonian*, *San Francisco Call*, *Sacramento Bee* and other leading papers. His people were pioneers in

Kentucky, Missouri, Kansas, Colorado and Humboldt County, California, in which last named place his uncle, John Ferril, a grandson of John Ferril, of old Cooper's Fort, scouted with General Grant during the Indian troubles before the war. Hence he always has plenty of data for sketches of western life. He was married December 12, 1888, at Rome, New York, to Miss Alice L. MacHarg, daughter of John B. and Susan MacHarg, of that city. He has one sister, Mary Alice, the wife of Dr. O. C. Trice, residing at Brookfield, Missouri. His father, the Rev. T. J. Ferril, resides at Glasgow, Missouri, and, at the present time, is the chaplain of the Grand Army of the Republic for the department of Missouri.



## CHAPTER XV.

## UTAH—1847 TO 1889.

UTAH TERRITORY was established in 1850 out of the northeast third of the Mexican cession in 1848 to the United States, and included all of its present limits, nearly all of that which afterwards became the State of Nevada, and about one-half of the area now embraced within the State of Colorado.

The territory was named after the famous Ute tribe of Indians that inhabited that region at the time of its acquisition by the National Government. The Mormons had, however, been led into the Salt Lake valley by Brigham Young, in July, the year before, and that little band constituted the only white settlement in the territory, and were the actual discoverers and explorers of the territory.

In 1850, when the territory was organized by act of Congress, Brigham Young was appointed its Governor, and Salt Lake becoming the seat of the Territorial Government, began to assume the proportions and aspects of a city. The Mormons rebelled in 1857 against the National Government, which rebellion was only quelled by the speedy dispatch of Federal troops to the territory. They established a post (Fort Douglas), which overlooked the city, and was so arranged as to be able to destroy the city in a very short time, and by that constant menace the Government has since been able to check any extensive resistance, which, however, has not been anticipated for many years, and the fort is now used more as a park than a menace of war. The discovery of gold caused many gentiles to flock to the territory, until now it is believed the Mormons are in the minority in the two principal cities of the territory—Salt Lake and Ogden.

In 1861, Congress passed an act establishing the Territories of Nevada and Colorado, which cut the limits of Utah down, and in 1866 an additional strip was detached from Utah, and added to the then organized State of Nevada, which left the territory with its present boundaries, comprising 84,970 square miles.

Utah is an immense basin, elevated about 4,000 to 5,000 feet above the level of the sea, surrounded by high mountains 7,500 to 13,500 feet. There are no considerable rivers in the territory. The Green, Grand and Colorado rivers flow across the southeast corner of the state; the Santa Clara, across the southwest corner; other rivers all flowing into the Great Salt Lake. This great valley is formed by the Rocky Mountains on the east, and Sierra Nevadas on the west.

streams are swollen into torrents, sometimes causing great damage from the overflowing of their banks. The water supply attains its maximum height between the 10th and 20th of the month of June. This statement may be given the force that attaches to a rule almost, if not entirely, without exception. The solidifying and freezing of the snow in winter, as above stated, makes certain the tenure of the water supply that would otherwise be both uncertain and disastrous; it prevents the too rapid melting which would result in absolutely uncontrollable torrents for a period, and thus makes the streams available for agricultural purposes.

"The experience of Utah farmers as to the best methods for increasing and preserving the water supply would be valuable only to people surrounded by a similar country with like elemental conditions existing. The only means of increasing the water supply is, so far as existing knowledge throws any light upon the subject, confined to the introduction of genuine artesian wells. Experiments sufficiently thorough to clearly demonstrate the success that would attend the digging or boring of such wells in Utah have not been made. The best opinions, however, are that the geological conditions existing in Utah are peculiarly favorable to their introduction and successful development.

"The territory, or rather its habitable portion, is composed of valleys, mountains and canons, with some lakes. The melting snow on mountain and in valley, which fails to find its way into some of the streams, must sink and collect somewhere, and there is a well-founded belief, which could easily be verified, that beneath these valleys are subterranean lakes that would feed, with a never-failing supply of water, innumerable artesian wells. To increase the supply by other means would be to increase the fall of snow, a thing humanity is not yet prepared to base a calculation upon. Preserving methods are, however, more practicable, and nature has done her best to make that task as light as possible. The outlet for all streams is into the valleys: The streams come from the canons high above the valleys, and the supply can be preserved or saved by the construction of reservoirs or dams. In case the latter method was adopted, it would simply be necessary to select the most suitable place in season, and place a dam across the ravine.

"The work would be more or less expensive, as the stream was large or small, and the canon wide or narrow, but in every canon suitable points abound, and as the future development and continued prosperity of Utah largely depend upon her permanent and increased water supply, her people will be forced to resort to damming the streams within their natural confines in the ravines. This idea carried out, would save the water that yearly runs to waste, the word 'waste' being used here with the knowledge that every drop of water is invaluable in a country where agriculture depends upon

irrigation, it is absolutely impossible to form even an estimate, and for several reasons; first, the volume of the stream differs every day in the year, and one year from another; second, it would require a measurement of the streams and a knowledge of the amount consumed in irrigation, which would increase with increased distributing canals and ditches. It may be safe to state, however, that if complete and thorough methods of saving were introduced, all the land in the territory, if it could be reached, could be well and thoroughly irrigated; this, too, without resorting to artesian wells, so vast is the amount of water that runs to waste during the winter, spring, and early summer months.

"As heretofore stated, the increase and decrease in the water supply depends entirely upon the fall of snow in winter, and, to an important degree, upon the fall of rain in the fall, spring, and early summer months. A very noteworthy fact, attested on the best authority, is that for a period of years there has been a steady increase in the water supply. It has been thought by many that the claims of increased water has been more imaginary than real. The claim, however, has been verified by measurements made in Great Salt Lake, which is the reservoir for many of the largest mountain streams, including the Jordan, which is the outlet for Utah Lake, the Bear river, the Ogden, Weber, Logan and Blacksmith Fork, and innumerable smaller streams.

"The lake has a shore line of 350 miles, and since 1856 the water has increased 14 feet in depth; and the Great Salt Lake, depending as it does entirely upon the inflowing mountain streams, and that amount of water which is not consumed by agricultural utilization, shows beyond question that there has been a marked increase in the water supply.

"This rise in the body of the water of the lake has taken place, it must be remembered, during a period when there was a rapid increase in the demand for water for agricultural purposes.

"The increase in the water supply in Utah since its settlement by Mormon pioneers, in 1847, has been not less than 75 per cent., and might be honestly put at 100 per cent.

"Whatever changes may have taken place in the grasses in Utah, are artificial. The native mountain 'bunch grass' has become so well known for its remarkably nutritious character, that rather than change it, the desire of the people of Utah, or those growing stock, would be to propagate it.

"Where irrigation has been applied for a few years, there has been a perceptible decrease in the amount of water necessary to properly irrigate the land. The decrease is placed at about 25 per cent. The census returns give the most available information as to the extent of irrigable lands.

"The value of such land depends entirely upon its location, not only in a territory, but in a precinct or county, and upon the character of the soil, which often differs materially from land adjoining it,



and enjoying the same water advantages. In earlier days all persons interested in the digging of a canal would turn out and keep on working, under the direction of a person chosen by themselves. Later laws were passed on the subject, and will be found by reference to the statutes of the territory, which will give the fullest attainable information as to water rights and conditions in the territory.

"Grants, of course, are given to municipal and canal corporations, counties and districts, but these also are set forth in the statutes.

"The most important undertaking of the class under consideration yet accomplished in the territory was the construction of a canal to supply Salt Lake City with water. The city was bonded for the purpose, and the canal was commenced in December of 1879 and finished in the fall of 1881.

"Its length is something over twenty miles, and its source is the Jordan River, a short distance below the point where Utah Lake has its outlet into the Jordan. The canal is twenty feet wide at the bottom, the depth being six feet, sufficient to carry four feet of water.

"The city was authorized to borrow \$250,000 on its bonds for the construction of the canal. The expenditures in detail were: For excavation, \$130,832.77; for dams, flumes, bridges and culverts, \$30,036.17; for lumber for flumes in the city, the distance being one and one-quarter miles of redwood flumes, \$24,844.56; for right-of-way, \$39,253.97; for recording deeds, etc., \$6,757.65. In cities the municipal corporations control the water, water-masters being appointed to regulate the division of the same.

We are indebted to O. J. Hollister, the able secretary of the Salt Lake Chamber of Commerce and ex-Colorado journalist, for the following well written and truthful exposition of Salt Lake City's boundless resources, prospects, etc., and knowing something of Mr. Hollister's reputation, the author, without hesitation, endorses all that gentleman states therein. We also wish in this connection to thank J. H. Bennett, general manager of the Denver & Rio Grande Western Railway, for the use of the cut of Lake Park bathing resort, which appears herein.





LAKE PARK ON GREAT SALT LAKE.

This beautiful bathing resort is on the line of the Denver & Rio Grande Western Railway, mid-way between Salt Lake and Ogden, and is the special pride of J. H. Bennett, General Manager.



## SALT LAKE CITY.

**S**ALT LAKE CITY is the industrial Capital of a region as large as Texas. It is the political Capital of Utah Territory. The land area of Utah is 52,601,600 acres; water area, 1,779,200 acres. There are supposed to be 3,000 square miles of irrigable-arable land; 10,000 of standing timber; and perhaps 20,000 of grazing land. About 13,000,000 acres have been surveyed, and perhaps one-fifth of this area, inclusive of 1,500 silver mines, has been disposed of under the land laws. With irrigation the land produces all the cereal fruits and vegetables common to the latitude in profusion and perfection. The population is estimated at 215,000—two-thirds Mormons. The assessed valuation for 1888 was \$46,379,969, about 40 per cent. of the real value. Adding 20 per cent. for mines (not taxed), and it gives about \$140,000,000 as the actual value of property in Utah. The annual product is supposed to be about \$30,000,000 divided nearly equally between mining, manufacturing and farming. These varied industries have grown up naturally together, with no help from the outside, and are capable of indefinite elaboration and expansion. The territory and every municipality thereof is forbidden, by Act of Congress, to incur indebtedness exceeding 4 per cent. of the assessed valuation of property. The revenue law is liberal, and taxation is moderate—but 1.7 per cent. for all purposes. The territory contains 1,140 miles of railroad, and owes nothing on account of railroad construction. All signs go to show that this railroad mileage will soon be doubled.

Salt Lake City is situated in the valley of the Jordan, where the Wasatch Range towers highest in a belt of fine land, sheltered and watered by the mountains, and stretching 350 miles south and 100 miles north. The Oquirrh Range walls the valley on the west, and low spurs from the opposing mountains enclose it on the south. Great Salt Lake lies west and northwest, 20 to 12 miles distant. The city is located on the alluvial cone of City Creek, which slopes gently south and west to the general level of the valley. From the debouchine of City Creek, a line a mile and a half long swung from the east southward around to the west, would take in the main part of the city. The slopes rising to the base of the mountains on the east and north make a vast bay or amphitheatre opening to the setting winter sun. The city has an area of 5,412 acres, and an absolute altitude of 4,354 feet. The streets are eight rods wide, the blocks 40 rods square, and divided into eight lots each. The trees lining the streets and growing upon the grounds fairly embowering the city, and most of the streets are accompanied by singing brooks from City Creek, the main source of the water supply. The water is piped from reservoirs under the streets.

The reservoirs have a capacity of 6,000,000 gallons; the water mains now measure 22 miles, and are extended as there is need for it. Along the main lines are 179 fire hydrants through which the water might be thrown over an eight story building. Utah Lake, Sweet Water in Utah Valley, 30 miles south, is a natural reservoir for the valley and the city, and the Cottonwoods and other streams pouring out of the Wasatch, can be drawn on in case of necessity.

The city is connected by rail with every notable valley and every mining district of present importance in the territory, with the favorite resorts, and with the entire county east and west. The warm springs and the hot springs are in the suburbs. The waters of the hot springs especially are alleged to be more efficacious in scrofulous, rheumatic, paralytic and some other diseases than those of the famous Arkansas hot springs. The bathing stations on the south and east shores of the lake are about 20 miles from the city. Not less than 200,000 persons took these baths last season. They have been improved and supplied with every possible attraction and convenience by the railway companies. In the long sunny days of summer the water is almost lukewarm, and a dip after business hours is restful and invigorating.

Fort Douglas lies between the city and mountains, about 500 feet above the former. Steam cars run to the Fort every hour in the day, from where a charming birds-eye view of the city and valley is obtainable.

One goes out past the ore smelters to the Cottonwood mines in the Wasatch, and to the Bingham mines in the Oquirrh, in an hour by rail; to the Stockton and Ophir districts is 49 miles; to the Tuitic mines, 70 miles; to the Beaver County mines, 230 miles; to the Park City mines, 100 miles, all by rail, and all semi-circling the city east, south and west. From these mines the yearly output is 165,000 tons of ore, four-fifths of which is reduced in the valley within sight of the city, the product at sea-board prices is worth \$1,000,000. Besides lead and silver ores, the mountains over-looking the city contain other minerals, iron, clays, sands, building and flagging stones, marbles, and within 50 miles inexhaustible fields of coal. To the latter, right over the Wasatch range, a railway is now being constructed.

The saline breath of the Great Salt Lake and the pure air of the neighboring mountain summits mingle in the atmosphere of the city. The shelter and the sea water appear to moderate the temperature so that only once in about five years does the thermometer read above 100 degrees Far., or sink below zero. The rapid radiation assures cool nights. Dust storms are rare, the winds are light, tornadoes and sun-strokes are alike unknown, severe lightning and thunder are infrequent. The sun shines almost perpetually, the air is invigorating, it is impossible to be low spirited; if one is ailing he soon forgets it; no words or meteorological statistics can convey an idea of the charm of the climate, which continues to grow upon one no matter how long a resi-

dent. Hardly any form of disease originates in the city or territory, while upon many diseases simple residence and use of the thermal waters in the suburbs of the Great Salt Lake in the warm season are more beneficial than ordinary medical treatment. There is no malaria, no asthma, no pyemia; pulmonary complaints are stayed or cured; there none of the more virulent fevers, and diphtheria takes on a relatively mild type.

Most of the city lies well for drainage, and sewers are at this moment being put in under the business section. There are 16 miles of street car line, upon which electricity is being introduced as the motive power. There are five public parks, four of ten acres each and one of 110 acres. There are 15 hotels, four or five first-class; two theatres, three hospitals, six libraries, ten non-Mormon churches, about twenty-five Mormon churches, twenty-one district schools, fifteen private schools, twenty-seven benevolent societies, nearly 10,000 houses and 1,250 offices and stores. The population is about 35,000. The assessed valuation in 1888 was \$15,455,150, about 50 per cent of the actual value. The rate of taxation (territory, county and city) is 17 mills on the dollar. The city owes about \$300,000, mostly contracted to bring water from Utah Lake. The revenue and expenditure run together, and are at the rate of about \$200,000 a year.

The city directory for 1888 names about 200 manufacturing establishments in the city, carrying on 60 different lines of manufacturing. Among the articles manufactured are boots and shoes, overalls, woolen goods, paper, silk, crackers, hosiery, furniture, sash, doors, blinds, beer, boilers, harness, marble, sewer pipes and tile, combination fence, tents and awnings, show cases, demijohns, cigars, salt, castings, machinery, lumber, pottery, leather, vinegar, gloves, hats, trunks, glass, chemicals, flour and meal, cut building stone, blank books, musical instruments, confectionery, engraving, lime, cement, brick, canned fruits, etc. The number of hands employed in manufacturing is estimated at 1,200, capital invested at \$2,500,000, value of annual product, \$4,500,000.

Sales of real estate in 1887 amounted to \$3,022,267; in 1888 to \$5,335,666, and in the latter year \$1,250,000 went into new buildings. Sales of the first quarter of 1889 were at the rate of \$5,080,000 for the year, with a decided increase in April. First-class business corners, 165 feet deep, are worth \$1,250 per front foot; inside ditto, \$1,000; second-class business corners, 165 feet deep, are worth \$500 per front foot; inside ditto, \$400. Best residence property within one mile of East Temple (Main) street, 165 feet deep, is worth \$40 to \$100 per front foot; the same, more than one mile and less than two miles from East Temple street, \$6 to \$40. First-class acreage property suitable for homes is worth \$1,000 per acre, and less eligible acreage property, drawing away from the heart of town to a distance of five miles, \$750, \$500, \$300 and \$100 per acre; houses of two to four rooms rent for



\$5 to \$15 a month; houses such as business and professional men require, rent for \$25, \$30, \$40 and \$50 per month; the best houses for rent being \$75 to \$100.

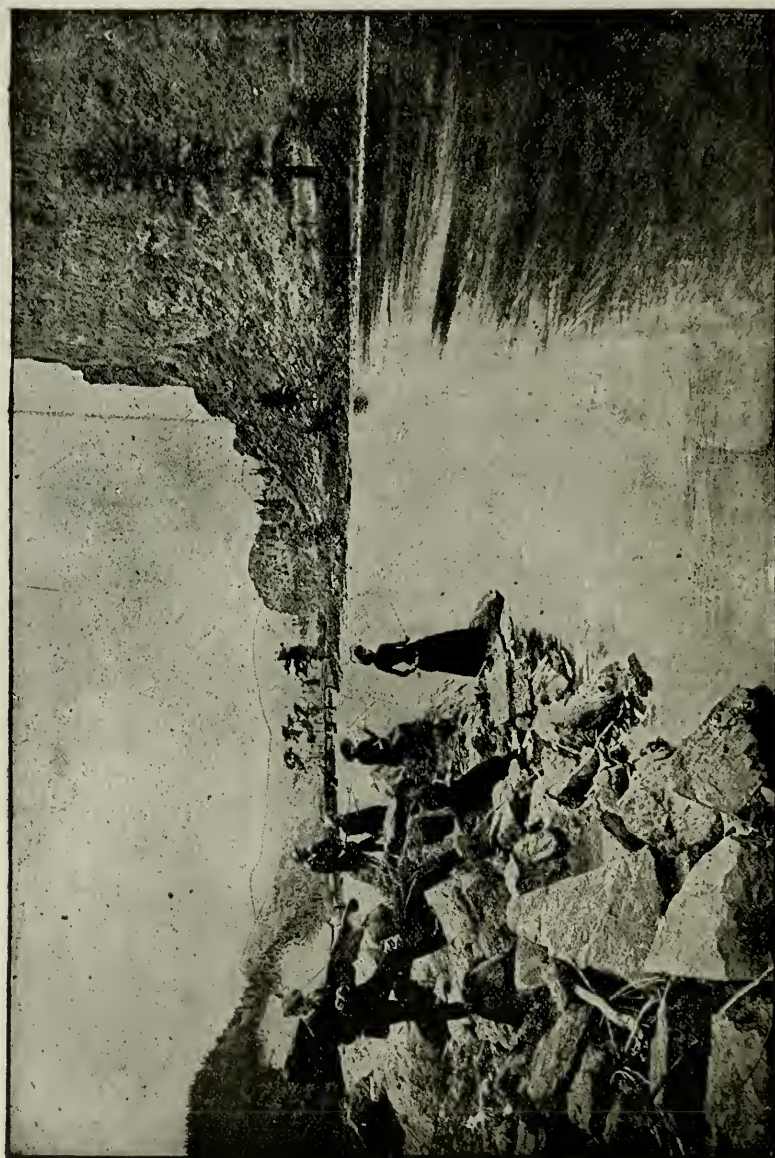
Among various recent movements looking to the improvement of the city are the securing of an additional water supply, the construction of new reservoirs, and the initiation of sewerage, the organization of two or three building associations, of a Chamber of Commerce, of a Produce Exchange, of a Real Estate Exchange; the bonding of the Territory to the extent of \$150,000 in aid of several needed public institutions; making the old Agricultural Society a Territorial concern, and putting it in the way to own grounds, and an exposition building; fixing the Capitol at the head of East Temple Street, on the elbow of City Creek Mountain. Additions to the city are numerous; Garden City, Eldorado, Buena Vista, over Jordan, Terrace Heights, Popperton, Capitol Hill, North Salt Lake, and a score of sub-divisions. On some of these new applicants for public favor improvements are being made with great energy, and regardless of cost.

The supply of labor in the city and territory, and the demand for labor, seem to run together neck-and-neck. Troubles between employers and employed seldom occur. Wages for skilled labor are rather high; for ordinary labor about the same as elsewhere in the West. The same may be said of the cost of living.

The municipal government is vested in a Council, composed of mayor, five aldermen and nine councilmen. Elections are held biennially, the second Monday in February for these officers, and for recorder, treasurer, marshal, assessor and collector. All other city officers are appointed by the council and hold office during the pleasure of that body. The division in elections is between Mormon and Gentile, and their strength at the polls in February, 1888, for mayor was 1,726 and 946.

All that may be truthfully said of the business opportunities of the place, and of the resources of the country tributary to it, the fact remains that the charm of the city and valley lies mainly in their setting in the heart of a vast desert. Come in from whatever direction, by rail or by wagon, or afoot, and one must pass over dry and dusty ways for hundreds of miles—veritable jornadas. The rich green valley, drawn out like a ribbon under the shadow of the mighty mountains and plateaus, quenching its undying thirst at a thousand clear streams and cool springs, highly cultivated and dotted with towns, seem and is an earthly paradise. The surrounding region will always be sparsely populated, comparatively speaking. The city will grow, not so much because its merchants and bankers will count their gains by the thousands, or its manufacturers have a large and insatiable market, as because of the agreeableness and healthfulness of its seasons, and the fact that it offers a residence where the powers of most diseases which afflict mankind are reduced to the minimum.

So far it has been the city of the poor. It will become the city of the rich. Every man carrying on any business of importance within 500 miles will make it his home. Men with fixed incomes will learn that it is pleasanter than San Francisco, Chicago, or New York, as a residence. Men and women suffering from loss of health will learn that it is in fact pre-eminent as a sanitarium. It must become a religious, a political, an educational center; a place where art shall be fostered, where the best brains and the best spirits shall gather. It must become all that a city can be, in business, in health, in power, in leadership, in beauty and adornment. In short, man must do his part as intelligently and faithfully as nature has done hers. This done, Salt Lake City will be all that a city can be.



Fishing on the Rio Grande.



## CHAPTER XVI.

## NEW MEXICO—1540 TO 1889.

THE territory of New Mexico was constructed in the year 1850 from the southeast third of the first cession from Mexico, containing all of that area now embraced within the Territories of Arizona and New Mexico, which lies north of the Gila, and west of the Rio Grande rivers. In 1853 a second cession was made by Mexico to the United States, known as the Gadsden Purchase, which, in 1854, was annexed to the Territory of New Mexico, extending the southern boundary line of that territory to its present limit, some 50 to 100 miles farther south; at the same time the eastern limits were extended across the Rio Grande river, and took in that unauthorized territory known as the Texas cession of 1850. Seven years later, Colorado Territory was organized and took quite a large portion from New Mexico's northeast corner.

In 1863, the Territory of Arizona was organized, and reduced the territory still further, leaving it, however, with its magnificent dimensions, with an area of 122,580 square miles. The only rivers of note to which New Mexico is entitled are the Rio Grande, which rises in Colorado, flows south through the territory, dividing it nearly equally into east and west divisions. This river is not navigable within the territory, is valuable for stock and agricultural purposes mainly; and the Pecos river, a branch of the Rio Grande, which rises a little north of the center of the territory, flows southeast into Texas, and finally to a junction with the Rio Grande about latitude 30 N., and longitude 25 W. A branch of the Colorado rises in the extreme northwest corner, and the Gila has its source in the southwestern part of the territory. Much of the territory is well adapted to agriculture, by means of irrigation, which system has been in vogue since the first discovery of the territory and settlement in 1540 and 1582, and had been practiced by the aborigines for all time as far as we are able to learn from the Pueblo Indians who were found there, and whose descendants are yet to be found within the confines of New Mexico.

About the time that De Soto was coasting along Florida, looking for the mouth of the Mississippi River, Don Antonio de Mendoza, Viceroy in Mexico under the King of Spain, fired with a desire to gain favor with his sovereign, and add territory to the crown, conceived the idea of fitting out an expedition to push northward and explore, hoping thereby to discover rich gold fields which were reputed in that

direction, the reports having been brought in by two or three survivors of Narvaez' expedition into Florida in the year 1528, who, in a wonderful manner, had made their way overland, from Florida to Mexico, having traversed almost the width of the continent, and wandered through a portion of this coveted territory to the north. Chief of these survivors was one Alvan Nunez, who had been treasurer to the expedition. In relating their experiences, he told the Viceroy, Mendoza, that great riches must abound in the mountains to the north, as the natives were a very rich people, living in large cities, and having an abundance of gold and silver. This information was corroborated by Indians that Mendoza had captured and made slaves of.

Notwithstanding Mendoza's desire to obtain this rich country for his sovereign, he hesitated attempting a conquest of such a rich and no doubt powerful people, his armed force being too small to cope with the foe he expected to meet; he, therefore, wisely concluded to send out a scouting or exploring party in the simplest possible garb, accompanied by a man of peace. The Viceroy took a poor bare-footed friar from his cell, by name, Marco de Niza, of the Franciscan Order of Priests; gave him Alva Nunez as a guide, and with a few natives, sent him out to explore the great unknown region beyond the northern mountains.

After reaching the most northerly point explored by the Spaniards, Culiacan, the wise friar, sent ahead the captive Indians, with messages of peace and goodwill to the distrustful natives. These promises of peace were received in good faith by a great many of the natives, who came down from their mountain hiding places to meet the good friar, who, with kind words and small presents and with promises to not capture and enslave them, as the Spaniards had done before them, he succeeded in gaining their favor, and, in return, they told the Spaniards to come and go as they chose. These natives returned to their homes and spread the news of the treaty of peace among their brethren. The friar and his small party then continued their journey northward and, it is believed, reached the Cibola (the name applied to the unknown region), or Zuni (as known to-day). The friar brought back information which to-day reads like a fairy story, and we omit it.

The next attempt to explore this territory was not until 1581, at which time the Church took the responsibility of fitting out an expedition to explore the country and convert the natives, believing conversion to be the most successful method of conquering the country and solving the secrets of this mysterious land. Two Franciscan friars were consequently started out from the Spanish settlement of New Biscay; they proceeded northward by the Rio Grande valley. For more than a year nothing was heard of them, and a rescuing party was dispatched; traces were found of the two pious men, but they failed to find them. This party, however, accomplished that which

the two friars had started out to do, viz.: made a successful exploration of the country. They followed the course taken by the Franciscan monks along the valley of the Rio Grande River. As they progressed northward they encountered populous towns on every hand, which improved as they proceeded, until they found themselves in the midst of a land of thrift and plenty, where the art of spinning, weaving and dyeing was practiced by the natives in a very skillful manner with the very crudest of machinery. The topography of the country resembled Old Mexico so much, that these explorers gave it the name of New Mexico, and, therefore, the history of New Mexico really dates from 1582-3, although its discovery dates back to 1540-1.

Acoma\* was probably the greatest town visited during this expedition (Old Fort Wingate is situated forty miles north of Acoma). The town was built upon the flat top of a high cliff, accessible only by means of steps hewn out of the solid rock, forming an impregnable fortress. Large cisterns were hewn out of the solid rock to store their water supply. They grew corn quite extensively, their fields being at some distance from the town, owing to the barrenness immediately surrounding their home on the cliff, and also that the ground might be irrigated by a neighboring stream. The Pueblos, therefore, were among America's first farmers to use the system of irrigation to supply the want of water, this section being dry and almost barren from lack of natural precipitation. The expedition turned westward from the valley of the Rio Grande and entered the land of Zuni. No particular discoveries were made, except here and there they found Spanish crosses erected by one of the former exploring parties, and they were told by the natives of a great lake, situated at a great distance, where a people dwelt who were very rich and wore bracelets and earrings of gold. The little band divided, some desiring to continue explorations with a view to finding this great lake, a small number desiring to return to New Biscay and report their discoveries, which they did. The leader, with a few men, continued his way forward, everywhere receiving good treatment from the natives, they regarding him and his followers as superior beings, caressing and feasting them while they remained in the country.

Without finding the great lake or the strange people who resided thereabouts, they returned to Old Mexico by the valley of the Pecos River, which they named "River of Oxen," because of the great herds of bison they encountered feeding along the valley. The reports by these returned explorers incited the people of Mexico to fit out an armed expedition with a view to conquering the Pueblos. The expedition was placed in charge of Juan de Onate, who invaded New

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\* Space does not permit an extensive description of Acoma. We refer you to "Three Years in Arizona and New Mexico," by S. W. Cozzens, for a full description of the Pueblo race of people, and assure you it will prove both interesting and valuable.—DANA.

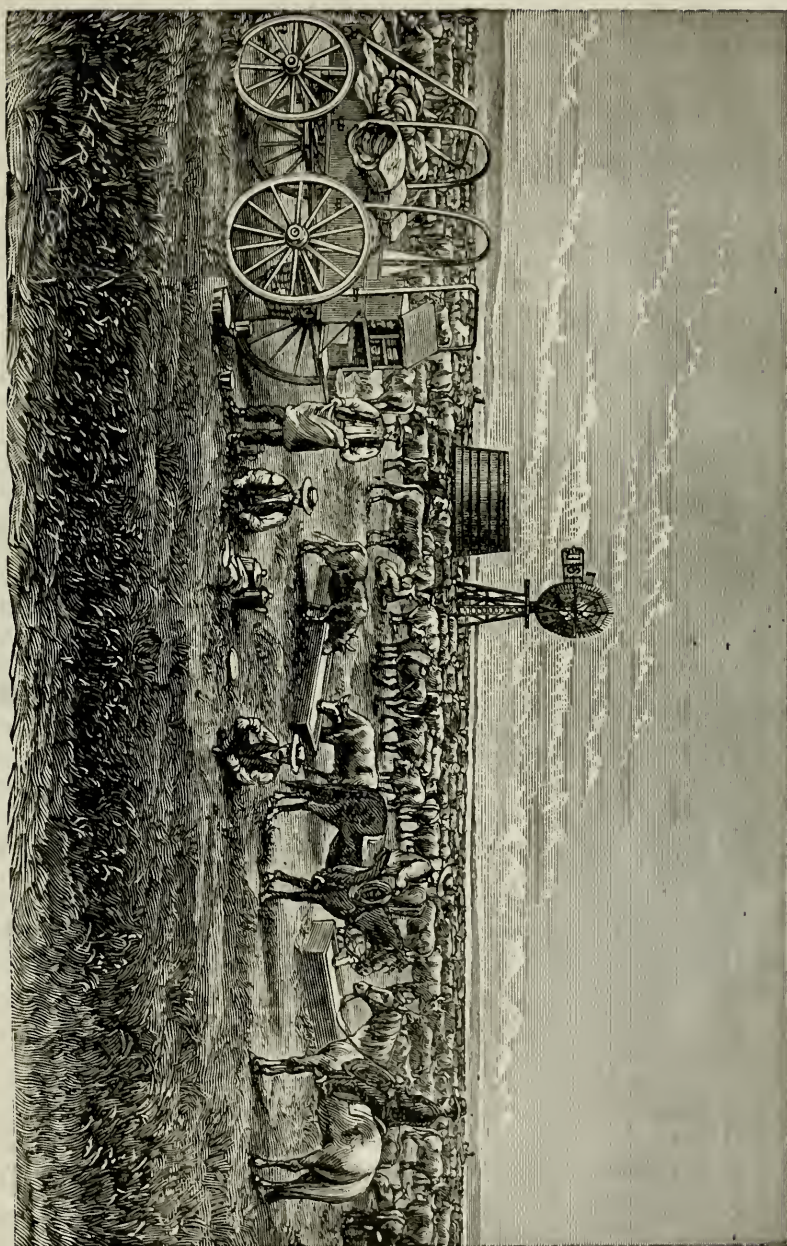


Mexico in about the year 1585 (no official data obtainable. The San Miguel mission was erected in 1587 at Santa Fe, and gives sufficient basis to warrant us in assuming 1585 as the correct date). Onate went armed with the viceroy's commission as governor of the territory to be conquered. Accompanying this expedition was a number of Franciscan friars, bent upon converting the Indians as fast as conquered, to accomplish which they erected missions in the towns as fast as subdued.

Onate proceeded rapidly up the Rio Grande, conquering as he went, until finally he reached the point where Santa Fe now is and there began to erect his capital. The seat of government was firmly established at Santa Fe, and Onate and his successors ruled the native population with a severe hand. Inside of fifty years the Catholic clergy had succeeded in establishing fifty missions, and Spanish rule had reached its greatest prosperity. For forty years more, little, if any, progress was made; the Indians, especially the Apaches and Navajoes, had become restless and for years had kept up an incessant warfare upon the Spaniards.

In 1680 the native population arose *en masse*, determined to remain slaves no longer, and, after a severe struggle, they succeeded in driving the invaders from the country with great slaughter. The remnant of the fugitives halted when they had fled as far down the Rio Grande as the present boundary line between Texas and Old Mexico, and there founded a town, which continues to bear the name of El Paso del Norte (meaning "the gateway to the north.") It was nearly fifteen years before the Spaniards recovered from their repulse in New Mexico, and not until about 1695 did they attempt a second invasion of the coveted territory. It required nearly five years to restore the lost power over the Pueblos. This time their stay was permanent, and they remained masters of New Mexico, successfully weathering the successive revolutions in Old Mexico, up to the treaty with the United States in 1848, when Mexico ceded it away, and the United States became its possessor. Since that time considerable progress has been made in New Mexico, and we now find her knocking at the doors of Congress for admission to the Union as a state, and we unhesitatingly say she possesses most of the qualifications necessary to enter upon the duties of local self-government.

New Mexico is traversed from north to south, near its center by the Rocky Mountain Range, with peaks occasionally reaching up to an elevation of 14,000 to 14,500 feet. Less important ranges diversify the western portion, peaks sometimes reaching an elevation of 11,000 feet. The northeast corner of the state is taken up by the Ratoon mountains, which reach an elevation of 10,000 feet. The larger part of the east half is plains, used extensively for grazing the immense herds of cattle that are owned in that territory.



A ROUND-UP SCENE IN NEW MEXICO.



The climate is cold in the elevated portions, and mild and dry in the valleys and on the plains, but everywhere healthy. Very little rain falls, and irrigation is resorted to, in some localities on a very large scale, they and thereby are enabled to rank well as an agricultural territory. Gold, silver, lead, copper and zinc are found in considerable abundance in various portions of the territory. The largest mica mine in America is in New Mexico near the Colorado line, and is owned and worked by Denver capitalists. Coal is believed to be in abundance in the territory, although no considerable find has yet been reported.

The principal cities in the territory are Santa Fe, the capital, and next to St. Augustine, Florida, it is the oldest city in the United States. It contains the oldest house and oldest church building in the United States, both being built of adobe, (a sun-dried brick), the former in 1540, the latter in 1587; Taos, Albuquerque, and Las Vegas.

In 1886 the territory produced from 48,625 acres, 973,000 bushels of corn, valued at \$681,100; from 80,566 acres, 921,000 bushels of wheat, valued at \$644,000; from 15,078 acres, 528,000 bushels of oats, valued at \$253,440; from 3,303 acres, 63,000 bushels of barley, valued at \$53,550; from 1,050 acres, 101,000 bushels of potatoes, valued at \$111,100; from 27,300 acres, 24,570 tons of hay, valued at \$356,265; making the total value of field crops amount to \$2,100,155. The territory contained, January 1st, 1888, farm animals as follows: 51,336 head of horses and mules, valued at \$2,059,272; 19,394 head of milch cows, valued at \$460,608; 1,257,597 head of oxen and other cattle, valued at \$18,911,121; 3,623,168 head of sheep, valued at \$3,953,239; 19,941 head of hogs, valued at \$112,466; a total of 4,971,436 head of live stock, valued at \$25,496,706, which, added to the average annual field product, makes a grand total of \$27,596,861.

New Mexico, next to Texas, will reap the benefits of the establishment of deep harbors on the Texas Gulf coast, owing to her proximity, and the necessity of almost the entire northwest, to traverse her territory to reach the Gulf.

New Mexico is ably represented on the Inter-State Deep Harbor Committee, by such representative citizens as Hon. W. W. Griffin, of Santa Fe; Hon. Frank C. Plume, of Taos, and Hon. Numa Raymond, of Las Cruces.



## CHAPTER XVII.

## WASHINGTON TERRITORY—1845 TO 1889.

WASHINGTON TERRITORY was first permanently settled by Americans at Tumwater, in 1845, although explored by Lewis and Clarke as early as 1805, under the direction of the United States Government. Originally it was a portion of Oregon Territory, and when it was erected into a separate territory in 1853, it comprised all of its present dimensions, and included a portion of what is now Idaho and Montana Territories. When Oregon was admitted into the Union as a state in 1859, the remainder of Idaho and nearly all of Wyoming, being detached from Oregon, was added to Washington Territory. In 1863 and 1864 Idaho and Montana Territories were organized with their present dimensions, and what is now Wyoming was annexed to Dakota Territory, which was organized in 1861. Washington was then left with its present magnificent dimensions, comprising 69,180 square miles, divided by the Columbia River, and Cascade mountains, into three grand divisions—Eastern, Central, and Western Washington. The Eastern is mainly agricultural, the Central agricultural and stock raising, some precious metal mining in the Cascade mountains, likewise anthracite and bituminous coal is found in the Central division. The Western division is mainly made up of valuable forests, with a small per cent. of agriculture.

The territory is well supplied with bays and sounds, affording most excellent shipping facilities. The Columbia river, which forms a portion of the southern boundary, supplies ocean-ship navigation almost up to the Cascade mountains. Puget Sound extends south into the heart of the Western division, and abounds in excellent harbors. Olympia, the capital, is situated on the extreme southern point of this indentation, while the excellent shipping points, Tacoma and Seattle, are situated farther north, on the same branch of Puget Sound.

The diversity of natural resources of Washington have attracted a large immigration to the territory, which has had the effect to force the National Government to recognize the territory's demands for statehood, and an Enabling Act was passed at the last session of Congress, providing for the admission of the State of Washington.

Washington is entitled to the second place in agricultural possibilities of all the territories, Dakota only being superior.

In 1887, Washington produced from 3,375 acres, 88,000 bushels of corn, valued at \$66,000; from 445,490 acres, 7,560,000 bushels of

wheat, valued at \$5,005,200; from 1,412 acres, 21,000 bushels of rye, valued at \$13,650; from 88,393 acres, 3,126,000 bushels of oats, valued at \$1,406,700; from 29,055 acres, 872,000 bushels of barley, valued at \$601,680; from 10,943 acres, 1,258,000 bushels of potatoes, valued at \$679,320; from 163,894 acres, 194,763 tons of hay, valued at \$1,460,723; total value of crops for 1887, \$9,293,273.

January 1st, 1888, Washington contained 97,365 head of horses and mules, valued at \$6,055,226; 65,523 head of milch cows, valued at \$2,181,916; 300,676 head of oxen and other cattle, valued at \$7,060,177; 549,885 head of sheep, valued at \$1,068,976; 91,054 head of hogs, valued at \$455,997—total, 1,104,503 head of live stock, worth \$16,822,332, which, added to the crop product of the year previous, makes a grand total value of farm products on hand January 1st, 1888, of \$26,115,605.

Fruit is being grown quite extensively in the territory, and is destined to prove a very valuable feature in the agricultural productions of the coming state.

Washington is well provided with railroads, in addition to the extensive navigation facilities, and contains many growing and prospectively large cities.

The climate of Washington varies from mild and damp near the coast to moderate in the valleys and extremely cold in the mountains.

THE CLIMATE OF WASHINGTON TERRITORY AS TAKEN FROM SIGNAL SERVICE REPORTS.

"Last July the Senate passed resolutions directing the transmission of reports prepared under the direction of the chief signal officer upon the climate and climatic conditions of Oregon and Washington Territory. These reports, together with illustrative charts and a letter from General Greeley, have just been published, and, in view of the emigration to the far Northwest, will be found to be of general interest. The rainfall on the Pacific Coast is the heaviest in the United States, ranging from 70 to 170 inches annually, but this enormous fall covers only 6 per cent. of the area of Oregon and Washington Territory. On the other hand, the area where less than 10 inches fall is less than 5 per cent. of the whole. Wheat can be grown in nine-tenths of these two states without irrigation. Owing to equable rainfall, agricultural operations are more fruitful with the small rainfall than in some sections of other states with a considerable larger precipitation. Remarkably equable temperature conditions also obtain, the entire range of mean annual temperature over this territory being but  $8\frac{1}{2}$  degrees—from  $45\frac{1}{2}$  at Fort Colville, in Northeastern Washington Territory, to 54 degrees at Ashland, Oregon. In 300 miles of latitude along the coast the range of temperature in the summer time is only  $3\frac{1}{2}$  degrees—from 56 at Port Angeles, Washington, to  $59\frac{1}{2}$  at Fort Stevens, Oregon. During the winter months the mean tempe-

rature of more than half of these states is above the freezing point, and, on the coast, ranges between 40 and 45 degrees. Gen. Greeley says:

“ ‘To summarise, Oregon and Washington Territory are favored with a climate of unusual mildness and equability. While the immediate coast regions have very heavy rainfalls, yet such rain occurs during the winter months of December to February, and in all cases the wet season gives place gradually to the dry season, during July and August. While the preponderating amount of rain falls during the winter, yet the spring, early summer and late fall are marked by moderate rains at not infrequent intervals. These climatic conditions favor, to a marked extent, the growth of most cereals, and other important staples.’ ”—*Minneapolis Tribune*, April 4, 1889.

Washington is well provided with schools and churches, and society averages very well with eastern communities.



## CHAPTER XVIII.

## DAKOTA—1682 TO 1889.

**D**AKOTA TERRITORY was originally included within the Louisiana Purchase, and comes within the limits of discovery which attaches to that portion of America claimed by La Salle for the French Crown in 1682; however, Dakota was not actually explored until nearly 100 years later, when the Hudson Bay Fur Company traversed the eastern portion from north to south with their long trains of Red River carts, each cart hauled by a single ox hitched in shafts. The Red River cart was a two-wheeled concern, manufactured entirely from wood and raw hide. It was a very clumsy affair, high, broad wheels, rough frame, and a high rack to accommodate the load of dried furs, which were carted down as far as Dubuque, Iowa, to be forwarded from thence by water to England. It is said that these trains were often made up of 5,000 carts in a string. One round trip a year was all that was expected of the train going south in the spring, laden with furs, through Dakota, and returning in the fall laden with supplies, through Minnesota. The latter was the shorter route, but impassable in the spring, owing to the low swampy character of much of the route through Minnesota, the route being through the bottom lands of the Red River of the North.

Not until the famous voyage of Lewis and Clarke up the Missouri River to its source, and from thence to the Pacific, in 1805, was Dakota explored with any view of settlement; nearly half a century then elapsed before any settlements were effected.

Dakota was first a portion of Minnesota Territory, until 1854, when it was covered by the Territory of Nebraska up to 1861, then it was organized as a territory, with its present boundaries. In 1864 the territory was enlarged by the addition of what is now Wyoming, the next change occurring in 1868, when the Territory of Wyoming was organized, reducing Dakota to its original and present size, which is magnificent in proportions, containing 149,100 square miles. Complying with the expressed will of the people of Dakota, the last Congress enacted that Dakota should be admitted into the Union as two states—North Dakota, and South Dakota—the dividing line, being the 46th parallel of latitude, which division gives about an equal area to each. Dakota has increased in population and wealth at a more rapid pace within the past ten years, than any other territory has in the entire

history of the United States. The population in 1880 was very little over 100,000, whereas to-day there are upwards of 600,000 inhabitants.

The surface of Dakota is an elevated plateau; average altitude about 1,700 feet. There are no mountains in the state, the nearest approach to which are the famous Black Hills, in the extreme southwestern corner of the territory. There are numerous streams throughout the territory, the largest, the Missouri River, which extends from the northwest corner to the southeast corner, being navigable throughout. The Red River of the North is the only other navigable stream; it flows north from Lake Travis along the eastern border and empties into Lake Winnipeg, in Manitoba, and is navigable for 200 miles in Dakota.

The eastern portion of Dakota is famous for its many large lakes, the largest, Minne Wakan, or "Devil's Lake," covering nearly 300,000 acres, and is very deep; it affords navigation to one large steamer, the Minnie II., and two smaller ones, the Arrow and the government steam launch. Considerable traffic in freight and passengers is accommodated by these steamboats, aided by a large fleet of sail boats, which ply between the several important points on the lake during the summer season. Devil's Lake is becoming famous as a summer resort, the most frequent spot on the lake being "Dana's Grove," founded by the author of this work. The other lakes worthy of mention are Stump Lake and Freshwater Lake, near Devil's Lake, Thompson, Long, Travis, Big Stone, Turtle, Wood, Tehanikanah and Pembina.

The climate of Dakota might be termed very rigorous, the winters being severe and very long, the thermometer often registering from 40 to 50 degrees below zero. Notwithstanding the low temperature, the winters are not severe, owing to the dry atmosphere.

The summers are delightful, the days being very long. Crops mature in a surprisingly short time. Dakota raises more wheat and oats than any other territory, and, including the entire United States, ranks sixth in wheat and twelfth in the production of oats.

The seasons are too short for successful corn raising, except in the southern half, notwithstanding which fact, Dakota outranks in that cereal all of the territories and ranks twenty-second in the entire United States.

Dakota produced in 1886, from 662,625 acres, 15,805,000 bushels of corn, valued at \$5,847,850; from 2,675,350 acres, 30,704,000 bushels of wheat, valued at \$15,966,080; from 5,145 acres, 67,000 bushels of rye, valued at \$28,140; from 825,600 acres, 20,651,000 bushels of oats, valued at \$6,195,300; from 56,000 acres, 1,232,000 bushels of barley, valued at \$468,160; from 46,800 acres, 3,042,000 bushels of potatoes, valued at \$1,764,360; from 275,000 acres, 385,000 tons of hay, valued at \$1,636,250—total value of crops in 1886, \$31,906,140.

Dakota contained, January 1st, 1888, 247,459 head of horses, valued at \$18,858,156; 12,323 head of mules, valued at \$1,206,340; 223,418 head of milch cows, valued at \$4,841,468; 767,800 head of head of oxen and other cattle, valued at \$16,687,171; 269,019 head of sheep, valued at \$700,526; 533,970 head of hogs, valued at \$3,173,918—total, 2,053,989 head of live stock, worth \$45,467,579, which, added to the agricultural product of the previous year, makes a grand total value of farm product January 1st, 1888, amounting to \$77,373,719.

Dakota produces no coal worth mentioning, except an inferior quality that is found in unlimited quantities west of Bismark, on the line of the Northern Pacific Railway, and the same quality found in the Turtle mountains in the extreme northern portion of the territory. Timber grows only on the banks of the streams, or on the margins of the lakes of the territory, and that not in merchantable quantities or quality, valuable mainly for domestic use.

Gold and tin are found in large quantities in the Black Hills, which enables Dakota to rank about fourth as a gold producer. Bismark is the capital of this, and one of the several quite pretentious cities in Dakota, Fargo, Grand Forks, Devil's Lake and Jamestown being the other prominent centers of population of North Dakota; Pierre, Mitchell, Huron, Sioux Falls, Aberdeen, Redfield, Chamberlain, Watertown and Yorkton are the principal cities in South Dakota.

The States of North Dakota and South Dakota will be admitted into the Union, by the President's proclamation before January 1st, 1890.

Dakota is vitally interested in the subject of deep harbors on the Texas Gulf coast, owing to her large agricultural resources, and should join without delay the movement inaugurated for the purpose of urging the importance of the matter upon Congress, which was inaugurated in Denver last fall at the Inter-State Deep Harbor Convention.



## CHAPTER XIX.

## IDAHO TERRITORY—1805 TO 1889.

IDAHO was first explored in 1805 by Lewis & Clarke, who were sent out by the United States Government to explore the Missouri River to its source, to cross over to the Pacific Ocean and complete the chain which ultimately bound the Pacific with the Atlantic states and completed the bond of union that has made this nation the greatest on earth.

The explorations of Messrs. Lewis and Clarke were a complete success and furnished the Government at Washington with the only valid title to this, until then, unexplored region. Idaho was at one time a portion of Oregon, then of Washington, and only became a separate division in 1863, when territorial organization was provided by act of Congress. The territory then included a portion of the present territory of Wyoming, which was detached in 1869, leaving the territory with its present boundary lines, British America on the north.

Idaho extends from 42 deg. to 49 deg. of latitude; has the British Possessions on the north, Montana and Wyoming on the east, Utah and Nevada on the south, and Oregon and Washington on the west. The length of the territory is 410 miles, and its width, from 257 miles in the extreme south, to 60 miles at its northern limit. Its area is 55,228,160 acres; of this 18,400,000 acres are classed as mountainous, 15,000,000 acres agricultural lands, 7,000,000 acres forests, 25,000,000 acres grazing lands, and some 600,000 acres lakes. Its vast mineral belts are included in the mountain area, as are also most of its forests.

Stretching along its eastern edge, and separating Idaho from Montana and Wyoming, are the rugged mountains of the Bitter Root, Rocky and Wabsatch ranges, the Bitter Root occupying the northern, the Rocky the central, and the Wabsatch the southern links in this boundary. The "spurs" of these ranges, especially of the Wabsatch, extend well over into Idaho, and they contain some of the territory's best mineral belts. Their highest peaks reach altitudes ranging from 9,000 to 13,000 feet. On the south and southwest are the Owyhee Mountains, which form an important link in the great divide between the waters of the Columbia and those of the Humboldt. The Sawtooth, Salmon River, Wood River and Boise are among the prominent mountain ranges in Central Idaho. On the west are the Blue Moun-

tains of Oregon and Washington. Idaho is, therefore, practically mountain-locked, although from the south, southeast and west there are numerous depressions through which railway and wagon-roads find easy, natural access.

The interior of the territory is a vast plateau varying in altitude from 600 feet above the sea in its lowest valleys, to 10,000 on the top of its highest peaks. The average elevation is from 2,000 to 3,000 feet less than that of Wyoming, Utah, Nevada or Colorado. Its numerous mountain ranges run in a variety of directions, the trend of the principal ones, however, being southeast to northwest. In these interior ranges are the mineral belts which first attracted general attention to the territory.

Alternating and nestling among the mountain ranges are many villages, large and small, affording in the aggregate a vast area of agricultural lands not exceeded in fertility by any in the world. Through these meander a river system well worthy of the extended notice which is given in succeeding pages.

The arable portions of the valleys lie from 600 to 6,000 feet above the sea, and they range in size from 1 to 20 miles in width, and from 20 to 100 miles in length.

Traversing Southern Idaho is the extensive volcanic belt on the basin of Snake River. This basin stretches far into neighboring territories, being 800 miles in length. In Idaho it averages about 50 miles in width. Some of the best valleys traverse it, but it is more noteworthy as the great winter grazing region of this and adjacent territories. Its nutritious herbs and grasses fatten thousands of cattle and sheep annually.

There are no navigable streams in the territory, although many small streams are found which are capable of supplying all of the water necessary to irrigate every foot of the 15,000,000 acres of agricultural lands, and falls of sufficient power to turn the wheels of manufacturing sufficient to supply the entire Great West. The climate compares favorably with Colorado, which was fully described in chapter XIII of this work.

The mineral wealth of Idaho is very great; gold and silver are found in nearly all portions of the territory, and the total output of those precious metals to date is well up to \$150,000,000, at present averaging about \$6,000,000 per annum. Coal has been discovered in the territory, but as yet no commercial use has been made of the find.

Idaho has an abundance of good milling timber, the area of which is reliably estimated at 7,000,000 acres, principally located throughout the central, eastern and northern portions of the territory, and generally convenient to water power.

Nearly one-third of this immense territory is suitable for agriculture, which, by means of irrigation, is made very desirable. Idaho produced, in 1886, from 1,950 acres, 42,000 bushels of corn, valued at

\$28,140; from 65,489 acres 1,039,000 bushels of wheat, valued at \$748,080; from 1,106 acres, 15,000 bushels of rye, valued at \$9,000; from 34,770 acres, 1,078,000 bushels of oats, valued at \$592,900; from 12,576 acres, 283,000 bushels of barley, valued at \$135,840; from 4,095 acres, 43,000 bushels of potatoes, valued at \$245,100; from 112,995 acres, 137,164 tons of hay, valued at \$1,371,164; total valuation, \$3,130,700.

January 1st, 1888, Idaho contained 104,080 head of horses and mules, valued at \$5,228,875; 26,458 head of milch cows, valued at \$705,635; 424,316 head of oxen and other cattle, valued at \$7,955,925; 312,408 head of sheep, valued at 640,436; 42,150 head of hogs, valued at \$252,900; making a total of 909,412 head of live stock, valued at \$14,783,771, which, added to the value of crop products, makes a grand total value of farm products January 1st, 1888, of \$17,914,471.

There are no considerable cities in Idaho, Boise City, the capital, is probably the most important; Haley and Blackfoot are each prosperous and growing cities.

Idaho has not yet joined the Inter-state movement for deep harbors on the Gulf coast of Texas, but, as it can be demonstrated that she is interested with the Great West in the improvement of such harbor facilities, we do not despair of soon receiving moral and financial support from this territory, as Idaho will ultimately form no unimportant part of the proposed "Western Commercial Congress," described fully elsewhere in this issue.



## CHAPTER XX.

## ARIZONA—1540 TO 1889.

ARIZONA was first explored by Coronado, a Spanish subject, in 1540; he penetrated this wild and unknown region as far north as the Magollan Mountains and, it is thought, entered New Mexico at the point where the Gila River crosses the boundary line, exploring as far as the source of that river. Evidences of Coronado's visit was found by Spanish explorers in 1583; Spanish crosses erected by him were encountered throughout Southern Arizona and New Mexico.

Arizona is bounded on the north by Utah and Nevada, on the east by New Mexico, west by California, and on the south by Old Mexico.

This territory was originally attached to Mexico during the Spanish rule, and remained a portion of the same throughout the strife and turmoil of that government until it was ceded to the United States in 1848 and 1854. In 1850 it was included within the territory of New Mexico, and was only detached in 1863, when Congress provided for the territorial government of Arizona. The territory was the home of the Aztec race, a no less interesting people than the Pueblos or Zunis of New Mexico. Several tribes of aborigines still inhabit the territory, mostly civilized and engaged in agricultural pursuits. The Aztecs are extinct, however; evidences of that powerful people and their advanced state of semi-civilization are found upon every hand; well preserved mummies are also found, which give to the present generation a fair idea of how that prehistoric race looked. The topography of Arizona is similar to that of New Mexico, slightly more elevated, but as susceptible of a high degree of cultivation by means of irrigation.

The territory contains an area of 113,916 square miles, divided about equally between mountain and plateau, the former reaching an altitude of 12,000 to 14,000 feet, the latter, in the northern portion of the territory, averaging about 7,000 feet elevation, gradually declining toward the south, until, on the southern border, it is scarcely 100 feet above sea level. The streams flow west and south, emptying into the Gulf of California. In their course they have cut their way through the mountain ranges, until often the bed of the stream is thousands of feet below the brink of the canon.

The Colorado River flows through the northwestern part of Arizona, and forms a portion of the western boundary line, and in its

course has cut through the solid rock until it has formed what is known as the Grand Canon of the Colorado, larger than which there are none in the world. This canon 400 miles in length, the perpendicular walls being from 1,500 to 4,000 feet high. This is the only navigable stream in the territory, navigable for moderate sized steamers some 400 miles above its mouth. The Gila, the next largest river in Arizona, flows from east to west entirely across the territory, and empties into the Colorado River just before the latter empties into the Gulf of California.

Arizona contains some good gold and silver mines, and is beginning to rank well as a precious metal producer. The territory is sparsely settled, and the natural resources are practically undeveloped, in fact, much of the territory is yet unexplored or prospected.

Agriculture has received very little attention from the white settlers, the little attempted being principally by the natives with rude implements and without system.

In 1886, the territory contained but 75,790 acres of cultivated land, producing crops valued at \$1,168,356. In live stock it averages well up with many of the other territories.

January 1st, 1886, the territory contains 12,149 head of horses and mules, valued at \$638,587; 16,298 head of milch cows, valued at \$606,286; 420,000 head of oxen and other cattle, valued at \$7,560,000; 658,561 head of sheep, valued at \$1,152,482; 16,444 head of hogs, valued at \$94,536; total 1,123,452 head of live stock, valued at \$10,051,891, which added to the value of the crop product, equals \$11,220,247, total value of farm product January, 1886.

Arizona joins in the movement for deep harbors on the Texas Gulf coast, was represented in the late Inter-State Deep Harbor Convention held at Denver by Hon. C. W. Lechner, and Hon. A. Leonard, of Phoenix, and Lewis Wolfley, (now Governor of Arizona), Tucson.

## CHAPTER XXI.

## MONTANA—1805 TO 1889.

**M**ONTANA TERRITORY was first explored in 1805, by Lewis and Clarke, under the direction of Thomas Jefferson, then President of the United States. Until 1854 it was included in that vast region of the United States known as the unorganized or Northwest Territory. In 1854 territorial rule was provided for, and Montana was then a portion of the territory of Nebraska, continuing thus until 1864, when Congress established the territory of Montana, with the present area, and supplied a government similar to the present form.

At the last session of Congress provision was made for Montana to become a state, and active preparations are now in progress to conform to the new order of things. The area of this magnificent territory is 146,048 square miles, or 93,491,200 acres. It is bounded on the north by British America, west by Idaho, south by Wyoming, and east by Dakota. The surface is generally mountainous; the Bitter Root and Rocky Mountains are in the west, the Little Rockies, Little Bear, etc., in the east, the Highwood in the North, and the Spoonbill range in the southern portion of the territory. Less than one-fifth of the territory is adapted to agriculture, two-fifths for stock raising, and the balance is valuable for the precious metals there found.

Montana ranks first in the Union as a precious metal producer. The value of the annual output now approaches \$40,000,000. A poor quality of coal is found in portions of the territory, sufficient for local consumption, but not valuable as a shipping commodity, owing to its slacking soon after it is exposed to the air. Most of the mountains are covered with a dense growth of pine trees, valuable for lumber and fuel. The territory is well supplied with rivers, the Missouri and Yellowstone Rivers furnishing navigation within the limits of Montana of over 300 miles each during most of the year, and, nearer their source, supplying an unlimited water power, which will ultimately be utilized for manufacturing purposes, etc. There are several other smaller rivers carrying a large volume of water, but whose descent precludes any idea of navigation. The waters from all these streams can be diverted from their natural course and used for irrigation purposes. It is believed that before many years Montana will be cultivating her millions of acres of agricultural lands, and, by means of



irrigation, bring the culture of field crops up to the highest state of perfection. Wheat, oats and other small grains are naturally adapted to the soil and climate of this territory, which stands next to Colorado in the yield per acre of these cereals, Colorado being first in the United States.

In 1886, Montana produced from 890 acres, 22,000 bushels of corn, valued at \$14,300; from 88,896 acres, 1,509,000 bushels of wheat, valued at \$1,131,750; from 56,774 acres, 1,987,000 bushels of oats, valued at \$1,095,850; from 3,144 acres, 72,000 bushels of barley, valued at \$32,120; from 4,253 acres, 451,000 bushels of potatoes, valued at \$405,900; from 139,650 acres, 152,048 tons of hay, valued at \$1,596,504; total value of field products \$4,274,424.

January 1st, 1888, the territory contained 192,881 head of horses and mules, valued at \$9,899,631; 31,132 head of milch cows valued at \$884,149; 934,500 head of oxen and other cattle, valued at \$17,948,007; 1,265,000 head of sheep, valued at \$2,658,398; 22,289 head of hogs, valued at \$150,898; a total of 2,445,802 head of live stock, valued at \$31,561,083, which, added to the crop value for year previous, makes a grand total value of farm products of Montana, January 1st, 1888, of \$35,835,507.

Montana's traffic is now very largely with the south, east and central portions of the Great West, and should exhibit more interest in the grand improvements to commerce contemplated by the action of the great Denver convention, in August, 1888, and perpetuated through the means of a permanent committee appointed at that time known as the Inter-State Deep Harbor Committee.

## CHAPTER XXII.

## WYOMING—1806 TO 1889.

WYOMING was first explored by Clarke, in 1806. It was upon the occasion of the return of the famous expedition under the charge of Lewis and Clarke, Lewis returning by the route pursued by the explorers, when going west. The year previous, Clarke, with a small party, recrossed the Rocky Mountains at a point considerably south, and encountered the source of the Yellowstone River in Wyoming. He embarked on the waters of that stream and floated down to the juncture of the Yellowstone and Missouri Rivers, and there joined Lewis on his home trip, they returning east via the Missouri River.

Wyoming was in the vast unorganized Northwest Territory until Nebraska Territory was organized in 1854, when it was included within that political organization. Afterwards Wyoming was attached to Washington, then a portion of Utah, Idaho and Dakota, and was only organized as a distinct territory in 1868, and then embraced its present area, 97,883 square miles, bounded by Montana on the north, Dakota and Nebraska on the east, by Colorado and Utah on the south, and on the west by Utah and Idaho.

The following from the Secretary of the Territory, S. D. Shannon, is a brief synopsis of the territory's resources, etc.:

"Wyoming is the youngest of the territories, excepting Alaska, having been organized under an act of Congress, passed July 25th, 1868. It is 365 miles long by 274 miles wide, covering an area greater than all the New England States combined. The general appearance of the country may be described as mountainous, with valleys, bold bluffs, foot hills and broad rolling plains. There are mountains covered with everlasting snows, deep canons and gorges and elevated plateaus or natural parks, like the great Yellowstone National Park. Of the entire area, 62,645,120 acres, more than 10,000,000 are covered with timber, and 15,000,000 acres are capable of being successfully cultivated; but the greater part of Wyoming is adapted to grazing. The mean elevation is about 6,000 feet above the sea level, the extremes ranging from 3,400 feet to 14,000 feet. In most of the valleys, in order to obtain crops, it is necessary to irrigate the land. The soil is of various qualities, but usually a rich loam covers the valleys and plains.

"Farming, however, is carried on only to a limited extent, the chief industry being stock raising. At the present time there are

nearly 2,000,000 cattle, 1,000,000 sheep and 100,000 horses and mules, worth in round numbers \$50,000,000. There are 5,000 miles of irrigation ditches in Wyoming, by which 2,000,000 acres of land have been reclaimed from their desert character. The Territorial Engineer estimates that fully 4,000,000 acres more can be made productive by the ordinary means of irrigation. If the aid of Congress or the state can be secured in the construction of great storage basins or reservoirs, the area of farming lands can be increased several times their capacity under present conditions. Coal in vast quantities is found in almost every county, varying from four to forty feet in thickness. There are engaged in this industry alone 2,000 miners, the product of whose labor in 1888 amounted to 1,455,220 tons of coal, worth \$4,365,720. One-third of this amount was paid in cash to the miners for taking out the coal. Wyoming contains mountains of iron, vast deposits of soda, gypsum, salt, sulphur, copper, lead, tin, mica and other minerals, also, marble, granite, sandstone, mineral paint, fire clay, kaolin, graphite, cinnabar and magnesium. Gold and silver are found in many places. Very extensive oil basins of petroleum exist in Central and Northern Wyoming, and must soon prove of great value. With the exception of coal, hardly any of the mineral wealth of Wyoming can be said to be developed. But the extension of new railroads throughout Wyoming will surely bring great changes in these undeveloped regions and give a wonderful impetus in increasing its wealth.

"According to the census of 1880, Wyoming had a population of 20,789; the present population is variously estimated between 75,000 and 100,000."

Mr. Shannon omits in the above any allusion to the petroleum possibilities of the territory, which industry promises to be Wyoming's most valuable resource. We therefore quote from the territorial geologist's reports (L. D. Ricketts, geologist), as follows:

"Few have any conception of the broad-spread occurrence of oil springs and indications now made known by active prospecting. It is found in numerous escapes in Uinta County near Hilliard and Fossil; in Fremont County, near Lander, in Dutton basin, and on the Stinking Water River; in Carbon County, along the base of the Rattlesnake Mountains, on Salt Creek and the South Powder; in Johnson County, on the South Powder and No Wood Rivers; in Crook County, at various points bordering the foot hills of the Black Hill Range and Bear Lodge Mountains.

"The three wells sunk on the Popoagie, in Rattlesnake district, all struck oil. At this place there is a small oval valley surrounded by abrupt, often precipitous, hills, over which, at various points he found oil and gas escaping. A good flow of oil was encountered in each. These wells, which varied in depth from 350 to nearly 800 feet, were cased and supplied with valves to prevent the oil from escaping, but



owing to the great gas pressure a large leakage cannot be prevented—a pressure so great that, upon suddenly opening the valves the oil spurts up like some black watered geyser for 75 feet in the air. After the pipe thus clears itself, the steady flow of the oil is assumed which, it is variously estimated, will aggregate from 600 to 1,000 barrels per twenty-four hours.

“In color this oil is black. When fresh it contains a very large amount of absorbed gas. It will yield both illuminating and lubricating oil of excellent quality when distilled, and a residue which will be used as fuel for steam making just as the residuum from the Colorado refineries is used under the boilers at the Leadville shaft.

Precious metals have not been mined to any considerable extent as yet, the prospects, however, are exceptionally flattering, and at no distant day it is believed Wyoming will rank high in the production of gold and silver.

The agricultural production of 1886 amounted to \$1,284,895 from 100,888 acres. January 1st, 1888, the territory contained 1,865,075 head of live stock, valued at \$29,420,909, according to the United States reports, the actual returns to the territorial and it or nearly doubles that amount, as is stated in Secretary Shannon's report herein quoted.

Wyoming has evidenced considerable interest in the Inter-state movement for deep harbor facilities on the Gulf coast of Texas, and is excellently represented on the permanent committee, appointed at the Denver Convention, by Hon. Francis E. Warren, now Governor of Wyoming; Hon. Joseph M. Carey, delegate to Congress, and Hon. F. J. Stanton, all of Cheyenne.

## CHAPTER XXIII.

## ALASKA—1741 TO 1889.

**A**LASKA was first discovered in 1741 by Russians, and became an important trading and fishing point before the close of the last century. In 1778 Captain Cook, in search of a northwest passage, coasted along Alaska and established the fact, not known before, that Alaska was attached to the North American continent; he also reported having seen large numbers of otters along the coast, which stimulated the Russians to establish fur-trading stations in that far-away land. One company, known as the Russian-American Company, secured a grant to Alaska from the Emperor Paul I. in 1799, for a period of twenty years, and two years later a settlement was permanently established at Sitka. The charter of the company was renewed again and again, and only expired about five years before the United States (in 1867) purchased the country from Russia for the sum of \$7,200,000, which, in the light of the present day, seems an insignificant sum for such a valuable and extensive country, although at that time the amount was considered a vast sum, and the Government was censured for the purchase.

Alaska boasts of the highest mountains on the North American continent—Mount St. Elias, 19,400 feet; Mount Wrangle, 20,000 feet. The territory contains an area of 581,000 square miles, laying between the 130th west and 165th east meridian, being 4,500 miles east and west, and between the 55th and 70th degrees of north latitude, being 1,000 miles north and south.

The Aleutian Islands, about 150 in number, with several active volcanoes, form an insular continuation of the North American peninsula of Alaska, in the shape of an arch or bridge, between the American continent and Asia, enclosing the Behring Sea, over which the United States claims control, and which is disputed by England. The subject will probably so complicate our relations with England, as to require considerable diplomacy to steer clear of an open rupture. Should war result with England over the seizure of English ships in Behring Sea, for violations of the regulations established by the United States Government for the protection of the fisheries of Alaska; then will this Government proceed to annex the territory once claimed by the United States and now known as British Columbia, and owned by England since the treaty of 1846. By right, we should own that territory now; it would then give us uninterrupted

connection with Alaska and land communication to within twelve miles of Asia, enabling us to accept Russia's proposition to meet us there with a railroad, and thereby form a continuous rail route from New York to St. Petersburg and Paris. Governor William Gilpin, of Colorado, has for years advocated just such a rail connection, and we hope he will live to see the work completed. It only requires about 7,000 miles of road to be built to accomplish the Governor's proposition—4,000 in America and 3,000 in Siberia. In the light of successful engineering in the Rocky Mountains, the task of reaching Behring Strait is entirely feasible; that railroad would open up the great territory of Alaska, which is in size equal to one-seventh of the entire United States. If war should not afford us the pretext to seize British Columbia, then should the United States endeavor to purchase the same from England, or, better still, create a sentiment in British Columbia favorable to annexation and have them make a request of Congress to permit their coming peaceably into the Union.

Alaska is valuable for its immense forests, and salmon, cod, halibut, and seal fisheries, and for precious metals; one mine alone, on Douglass Island, is turning out \$200,000 in gold per month; other valuable mines and placer ground are known to exist, but not as yet much prospected. Coal is said to be found in the territory; the last report of Gov. Swineford describes several marvelous veins, varying in thickness from 2 to 15 feet, and quality equal to the famous cannel coal. Some of the islands are said to abound in the finest quality of grass for grazing purposes. It is said some San Francisco parties have frequently shipped large herds of cattle up there, in the spring of the year, to fatten on the native grasses, slaughtering in October for return shipment, any quantity of ice being obtainable for preserving the beef in transit.

Regarding commerce, Gov. Swineford has to say:

"The commerce of Alaska is at present such only as grows out of and is intimately connected with, its fisheries, fur trade and mining interests. Its extent may be inferred from the following carefully estimated statement of the market value of the products of her several industries the present year:

Fur trade .....	\$3,000,000
Gold (bullion and dust).....	2,000,000
Fisheries.....	4,000,000
Lumber and Ivory .....	100,000
Total .....	<hr/> \$9,100,000

"The indications are that the output of gold will be trebled, if not quadrupled, the coming year, while there is every prospect that a large amount of capital will be added to that already employed in the fisheries. The fur trade is at its maximum, and aside from the fur-seal



industry, may be expected to diminish in volume just in proportion to the development of the other natural resources of the territory.

Alaska is the only novelty left for the tourist and sight-seer in all this great world; every other place of interest has "been done" by the tourist. During the past two years, Alaska has received some attention from pleasure seekers, and the Pacific Coast Steamship Company has placed additional boats upon their Alaska route, and in various ways so improved the service that a trip from San Francisco or Port Townsend to Alaska is but a charming pleasure trip, with every luxury known to ocean or river navigation.

The excursion fare is extremely low, say from San Francisco to Alaska and return, \$130, which covers nearly a month's time, about 4,000 miles of transportation, besides meals and sleeping accommodations on board the steamer. From Portland and return, \$110. From Tacoma and return, \$100. From Port Townsend and return, \$95. Excursion tickets are sold only during excursion months, viz: from May to September inclusive.

## CHAPTER XXIV.

## OKLAHOMA, APRIL 22, 1889.

OKLAHOMA is the smallest and newest territory of the United States, is situated in the midst of the Indian Territory, and contains less than 2,000,000 acres of area. For years a persistent effort has been made to open up for settlement this valuable tract of land, which Captain Payne and thousands of his followers believed was public land without the formal act of Congress, and consequently at short intervals invaded the territory with a view to settlement, and was each time ejected by the United States troops. For several years this invasion and ejection play (sometimes very serious play) was continued and had the effect of turning all eyes to that coveted spot, whose virtues had become magnified into a veritable Eden; the consequence being that, when Congress passed an act permitting the President to proclaim the country open for settlement, there was a grand rush of probably 100,000 people to that territory. The President wisely, or unwisely, fixed a definite day upon which settlers might enter Oklahoma, the effect being to concentrate this immense concourse of people upon the frontier several days in advance of the date fixed. Upon that day, April 22nd, 1889 the whole number, (twice or thrice the number that could possibly get a quarter section of land), made a mad rush for the supposed Eden. In one day the entire area of public land was seized; towns were created, and large cities formed, Guthrie, the capital, sprang from nothing at noon of that day, to be a city of 15,000 people before sunset of the same day. Such an event never before occurred in the history of the world. Probably the greatest lesson taught by this rapid absorption of public lands was, that the public domain is being so rapidly settled upon, that "Uncle Sam is rich enough to give us all a farm," will die with the Nineteenth Century.

## CHAPTER XXV.

EX-GOVERNOR WILLIAM GILPIN'S MAP OF  
THE WORLD.

AS fitting close to our review of the Western States and Territories, we feel like describing Governor Gilpin's new Map of the World, but in doing so we must tell our readers who Governor Gilpin is. He was one of the earliest explorers of the Rocky Mountain region; he has spent about fifty years of his life in the Great West; was the first Governor of Colorado; afterwards visited England, and presented his revised map of the world to the greatest scientific societies of the world, and explained his plans, so that great attention was paid to his theory of the future rail connection between Europe and the United States; he was elected a member of the English scientific society, and was royally entertained by the greatest men in England. He returned to Colorado, and has since resided in Denver. He is a man of large fortune and very learned. His hobby is to build a railroad to Behring Strait, to connect with one to be built by the Russian Government through Siberia to Behring Strait. Governor Gilpin still lives, though much advanced in years; he may be seen walking the streets of Denver any fine day, greeting his numerous friends, happy in the city's fulfilment of his oft repeated prophecies, made when Denver had but a few straggling huts to indicate its existence.

Governor Gilpin's map is the reverse of Mercator's Projection; instead of the center of the world being in the middle of the Atlantic Ocean, he makes that point to be at either end of his map, his expression being, "I have wiped the d—n Atlantic from the face of the earth," his projection being a great improvement over Mercator's, in that he makes land communication take the place of a dangerous ocean connection.

Our American Continent was peopled thousands of years ago, and no doubt exists at this time, that it was peopled from Asia by the Behring Strait route, they having crossed into America by means of the ice bridge which forms every winter over the strait. After crossing they gradually worked their way southward and eastward until the country was occupied by the aborigines, found here by Columbus in 1492. It is now quite certain that Governor Gilpin's hopes will, before many years, be realized, and we will have one more evidence of



history repeating itself, in that communication between the eastern and western hemispheres, will be via Behring strait, we having followed the path marked out for us by the pre-historic races, which existed in America, and from which our American Indian sprang. This time, however, we will cross upon an artificial bridge, and revel in the luxury of a palace car and commissary, making the trip in less days than formerly required years, and, instead of our going east to reach Europe, we will reverse the rule, and New-Yorkers will have to come through the Great West to reach London, Paris, etc., or else make the present dangerous ocean passage.







# APPENDIX.

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## A SUMMING UP OF THE RESOURCES AND POSSIBILITIES OF THE GREAT WEST.

In the interests of the Texas Deep Harbor movement, the following statistical facts are appended, with careful comparisons and deductions. We have compiled the facts from the latest United States reports, aided by the report of the statistical committee appointed by the Fort Worth Convention in July last, of which Hon John Hancock, of Austin, Texas, was chairman, and Hon. Henry A. Lewis, of Dallas, Texas, was secretary. Mr. Lewis performed his work with care and precision, and where we quote from his compilation we feel that we can recommend its accuracy equal with the United States reports from which we quote. We shall not tire our readers with a long list of figures, but confine ourselves to totals in groups, dividing the United States by the Mississippi River into East and West, and stake our reputation on their being exact as taken from the sources acknowledged.

The total area of all the States and Territories west of the Mississippi river, exclusive of Alaska Territory, amounts to 1,840,595 square miles. Alaska contains 577,390 square miles, but being detached and not calculated in our estimates to follow, we will not include it in the grand aggregate of area.

East of the Mississippi river the total area is 1,187,859 square miles, or, the West is more than one and one-half times in area that of the East.

West of the Mississippi river in the United States, it is estimated by competent authorities, there are fifteen million human beings—one-fourth of the population of the entire Union. The total appropriations of the United States Government for public buildings, rivers and harbors, roads and canals, light stations and beacons, forts, arsenals and armories, from 1789 to 1886 amounts to the vast sum of \$426,794,810, or \$7.11 for each inhabitant, basing population of 1886 at 60,000,000. Of this enormous sum there was expended in the States east of the Mississippi river and including the improvements of that river and tributaries and the State of Louisiana, \$292,357,775, and the greater portion of unclassified or miscellaneous appropriations, which amounts to \$150,655,219, which would make at a fair estimate \$390,000,000 expended for public improvements east of the Mississippi river, or \$8.66 per capita.

In the States and Territories west of the river, exclusive of Pacific Coast States, \$20,102,372, or \$1.54 per capita, based on a population of 13,000,000. In the Pacific Coast States \$16,825,491, or \$8.41 per capita, based on a population of 2,000,000. It is hardly fair to include the Pacific Coast with the trans-Mississippi States in a comparison with the East, owing to the fact that nearly every dollar of the above Pacific Coast appropriations was expended in harbor improvements and defenses, which concern the East quite as much as the West. If, however, we include the Coast, we have a total appropriation of \$36,927,863, or \$2.46 per capita. We are entitled in proportion to population to have expended \$90,000,000 more by the Government in public improvements, without one cent more being expended in the East, to even us up with that section of the United States. We are at present too weak to enforce our demand for a just proportion of the Nation's favors, but the time is approaching when this vast Western Empire will cut no small figure in National affairs, and, at no distant day, the East will have her sins hurled back upon her by the balance of power wielded by the West. We can almost see the Grand Old Man (who will be to the West what Governor John Evans has been to

Colorado), standing upon the summit of Pike's Peak (that grandest of all mountains), and defying the money bags and monopolists of the East, because he shall then have to support him the majority of the legal voters of the United States, and wealth extracted from the mountains or produced by the fertile plains and valleys, such as the East never dreamed of and the world never saw.

We shall then have evened up on a Nation's favors. We shall have demanded and received appropriations from the National Government to build harbors, erect government buildings, store the surplus water for irrigating purposes, etc., etc. We demand for The Great West \$10,000,000 for deep harbors on the Texas-Gulf coast, as much more for the construction of immense reservoirs to store the waters of our mountain streams during the seasons that the torrents rush onward to the sea, unchecked and unappropriated, wasted, and worse than wasted, for it swells the lower rivers until their banks are overflowed, devastating the fields, destroying thousands of homes and drowning their occupants—the loss by one season's overflow sufficing to erect reservoirs that would check in its incipency and for all time the dreadful flood, and one season's crop from the land made fertile by these proposed irrigation storage reservoirs would exceed in value the cost of the reservoir construction, so that to the government we offer an investment that will yield 200 per cent. per annum income. We propose further on to show an income from an investment by the Government in Texas deep harbor ports that will show even greater returns.

In the past history of the Government many millions of dollars have been squandered through appropriations for public improvements—in fact it has been the rule rather than the exception—and our law makers have come to regard such appropriations as so much money wasted, and as a rule the men who are sent to Congress are not business men, and do not know an investment from a donation.

We do not appeal to Congress for a donation. The Great West is not peopled by paupers. We ask and demand of this Government, of which we are no small portion, a just distribution of the Government's appropriations or investments. We want \$90,000,000 more money invested in this Western Empire before another dollar is invested in the East. That already wealthy section is to-day enjoying the returns from the millions of the Government money that justly belongs to the West. If the Shylocks of the East imagine this order of things can be tolerated forever, then will a fearful day of reckoning come to them. If the politicians of the East imagine that the West will forever tolerate being snubbed, slighted or cajoled, then will there come a day of reckoning for them such as they never dreamed of; and if the great transportation monopolies imagine that the West will forever submit to their extortion, then will they come to grief.

Even now the light dawns upon us which proclaims the morning of the day of deliverance.

The Denver, Texas and Fort Worth railway has saved the commerce of Denver from being entirely controlled by the whim or caprice of an Eastern railroad president. The D., T. & Ft. W. road opened up to Denver less than one year ago a short highway to the sea, which is being used by all of the Territories to the West and north of us to keep the east and west trunk lines from practicing extortion.

Returning to the statistical, we take up the farm products of the United States and make comparisons.

The year 1886 being about an average year for crops, and official data by the United States not being obtainable later, we will confine our estimate of field crops to that year. In 1886 the United States produced 1,665,441,000 bushels of corn, and shipped out of counties where grown 288,640,900 bushels of that crop. Total exported, 42,000,000 bushels. The States and Territories west of the Mississippi produced 739,149,000 bushels, and shipped out of the counties where grown 170,757,060 bushels, nearly one-half of the corn product; and, nearly two-thirds of the



surplus, amounting to more than four times the total corn exported during that year from the United States. The actual amount crossing the Mississippi river from the west is not obtainable, but aggregates about four times the actual export from the United States of the corn product, and should be shipped out of the country via the Gulf route without burdening the Eastern markets.

The wheat product of the United States for 1886 amounted to 457,218,000 bushels. The amount shipped out of the counties where grown was 263,170,110 bushels. Total exports, including flour, 160,600,000 bushels. The States and Territories west of the Mississippi river produced 222,584,000 bushels, about one-half of the entire product of the United States; and shipped out of counties where grown 133,626,521 bushels, more than one-half of the surplus of counties of the United States, and almost equal to the total exports of the United States of that product for that year.

The pork and beef supply of the United States comes mainly from the States west of the Mississippi river. Cotton, sugar-cane and tobacco are likewise principally produced west of the river. January 1st, 1888, the States west of the Mississippi river had 22,614,795 head of oxen and other cattle, exclusive of milch cows, and the entire United States had but 34,378,363 head. The West therefore had nearly two-thirds of the cattle of the United States. The trans-Mississippi States had January 1st, 1888, 20,523,899 hogs; the entire United States had 44,346,525 head. Therefore the West had nearly one-half of the hogs of the United States. Commissioner, now Secretary of Agriculture, Norman J. Colman, in his reports of 1887 states that the average of exports of swine products per annum for twenty-seven years past has been 15 per cent. of the production, or about 4,500,000 hogs. The same authority gives the annual production at 30,000,000 head; the West is then entitled to a credit of producing about 15,000,000 hogs annually, or one per capita. The East produced about 15,000,000 head, or one-third per capita, a little short of the actual consumption. they requiring from the West about 5,000,000 head per annum.

In proportion to population the West stands in production of corn, 50 bushels to each person, while the East stands 20 bushels to each person, or in proportion to population the West is two and one-half times the East. Secretary Coleman estimates that in the United States the proportion of consumption of corn averages 25 bushels per capita. The States east of the Mississippi therefore lack five bushels per capita of supplying local consumption. West of the Mississippi the States produce 25 bushels per capita more than local consumption. Therefore, after supplying the local demands of the East with five bushels per capita, or 225,000,000 bushels, the remainder of surplus amounts to more than four times the total export of the United States.

In wheat the West produced 15 bushels per inhabitant, while the East produced about  $3\frac{1}{2}$  bushels per inhabitant; or in proportion to population the West produced four times the East. Secretary Coleman estimates that the average consumption of wheat in the United States is  $4\frac{1}{2}$  bushels per capita as follows:

The estimates of production, as recorded in our reports, average 448,000,000 bushels, in round numbers, for seven years since 1880, not including the present year. The exportation averages nearly 136,000,000 bushels, and with estimates of seed and bread, the entire distribution averages over 447,000,000 bushels. The difference is less than the losses by fire and foundering en route to market. These figures may not be absolute proof of the accuracy of the estimates, because the consumption is estimated. But as no one has furnished evidence to disprove the accuracy of the rate of consumption of  $4\frac{1}{2}$  bushels per capita, there is no peg in existence upon which to hang a doubt as to the verity of the estimates. As the range of annual production is more than 150,000,000 bushels, and that of exportation as large proportionally, the estimates made in advance of consumption are entirely



independent of the ultimate facts of distribution, and are made entirely from the crop records of the year.

As to the per capita rate of consumption, it is almost a bushel less than that of Great Britain; and it corresponds with all data of local distribution that has been found available, especially in New England and the Middle States, which obtain a large portion of their supply from the West. Those States consume five bushels, and the West quite as much, while some of the Southern States require but three or four. The average of  $4\frac{2}{3}$  bushels was fixed ten years ago from an exhaustive study of the local facts of distribution, and will be changed only on proof of inaccuracy, or at least a strong presumption fortified by ample facts. It should be remembered that in addition to wheat, about three bushels per head of maize is used for human food, besides oatmeal, rye and buckwheat, making the fullest bread ration of any nation in the world.

If this rate is too high, then the estimates are too high; if too low, they are equally understood. That they are not too high is a reasonable conclusion, from the fact that in 1879 the wheat estimate was two per cent. lower than the census enumeration, and in 1869 it was six per cent. lower, and that all estimates of area and of comparative product tend naturally to be low rather than high, notwithstanding efforts made to prevent under-estimate.

The following table presents the exports and home consumption in comparison with the estimates of production, the latter made months before it is possible to know the extent of the year's contribution to the supply of the European deficiency:

Years.	Production.	For Food.	For Seed.	Exportation.	Total distribution.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1880.....	498,549,868	242,086,655	56,563,530	186,321,514	484,971,699
1881.....	383,280,090	235,249,812	55,215,573	121,892,389	412,357,774
1882.....	504,185,470	255,500,000	52,770,312	147,811,316	456,081,628
1883.....	421,086,160	259,500,000	54,683,389	111,534,182	425,717,571
1884.....	512,765,000	265,000,000	55,266,239	132,570,366	452,836,606
1885.....	357,112,000	271,000,000	51,474,906	94,565,794	417,040,700
1886.....	457,218,000	277,000,000	51,528,658	153,804,970	482,333,628
Total.....	3,134,196,588	1,805,336,467	377,502,607	948,500,532	3,131,339,606
Average.....	447,742,370	257,905,210	53,928,944	135,560,076	447,334,229

Thus in seven years since 1879 the average of annual estimates is 447,742,320 bushels, and the distribution 447,334,229 bushels. This is marvelous closeness, especially in view of the fluctuating export, ranging from 186,321,514 to 94,565,794 bushels. Thus three-tenths of our wheat has been exported in the last seven years, and the proportion exported of the last crop (one-third) is only exceeded by the unprecedented volume and percentage of the crop of 1880, and only twice exceeded in the history of our wheat exportation."

The West, as will be seen by estimates of the highest authority of the United States on agricultural products, produces  $11\frac{1}{3}$  bushels per capita more than local consumption, and the East 1 bushel less than local consumption; therefore the West must supply the East with its deficit, 45,000,000, and actually supplies all of the export of the wheat product. There is a discrepancy of nearly 30,000,000 between the actual amount of surplus left in the West, after supplying the deficit of the East, which may be accounted for by wheat shipped into the United States from British America in bond and exported in flour. In our calculations we reduce flour to bushels of wheat, and corn meal to bushels of corn. Of corn we have a grand surplus, not accounted for either in export or supplying the Eastern deficit, which, without doubt, feeds the West's surplus of cattle and hogs.

Secretary Colman furnishes us no statistics of cattle consumption or export, and we therefore refrain from comparisons, except that the surplus of the West undoubtedly makes up a deficit in the East equal to nearly the annual production of the States east of the Mississippi and all of the export.

In hog product the average local annual consumption is about one-third of one hog per capita. The East does not produce its quota; therefore the West must supply the deficit, which it does, and its surplus also supplies the export demand.

Cotton is raised entirely in the Southern States, the majority of which lie east of the Mississippi river. However, in the four cotton producing States west of the Mississippi river nearly one-half of the cotton produced annually in the United States is raised, 2,550,000 bales in 1887, out of a total of 6,439,000 bales, Texas alone producing 1,345,000 bales. The cotton raised east of the river is principally manufactured in the United States, the cotton factories, with a single exception, being east of the river; therefore, the amount produced west of the river is nearly all exported. The exports of cotton in 1887 amounted to 4,400,000 bales.

The West supplies the raw material exported, and is justly entitled to direct transportation via the Gulf and is entitled to every harbor facility required. The following table of exports will give the reader a comprehensive view of the point we are making :

	Total Export.	West supplies the East for local consumption	West supplies for Export.
Corn, bushels.....	42,000,000	225,000,000	42,000,000
or pounds.....	2,352,000,000	12,500,000,000	2,352,000,000
Wheat, bushels.....	156,971,949	45,000,000	125,000,000
or pounds.....	9,418,316,940	2,700,000,000	7,500,000,000
Hogs, head.....	4,500,000	5,000,000	4,500,000
or pounds.....	900,000,000	1,000,000,000	900,000,000
Cotton, bales.....	4,400,000	none	2,000,000
or pounds.....	2,200,000,000	none	1,000,000,000
Total pounds.....	14,870,316,940	16,200,000,000	11,752,000,000

Thus it is seen that the West's surplus for export is within about 3,000,000,000 pounds of the total exports of the United States for those products, the actual surplus of the West for export being 5,876,000 tons.

TABLE OF COMPARATIVE DISTANCES TO NEW YORK AND TO THE TEXAS GULF  
COAST—IN MILES

	To New York.	To the Gulf.
Little Rock, Arkansas.....	1080 miles.	440 miles.
St. Louis, Missouri.....	885	720
San Francisco, California.....	2650	1820
Topeka, Kansas.....	1135	680
Des Moines, Iowa.....	1000	830
Lincoln, Nebraska.....	1185	820
Cheyenne, Wyoming.....	1600	1020
Bismark, Dakota.....	1335	1240
St. Paul, Minnesota.....	1200	1120
Boise City, Idaho.....	2160	1400
Santa Fe, New Mexico.....	1735	760
Denver, Colorado.....	1620	920
Salt Lake City, Utah.....	1960	1200
Helena, Montana.....	1920	1495
Oregon City, Oregon.....	2440	1385
Carson City, Nevada.....	2380	1485
Tacoma, Wash. Ter.....	2550	2000
Tuscon, Arizona.....	2000	850
Totals.....	30835	20685

The difference in favor of the Gulf amounts to 10,150 miles from the centers of each of the eighteen States, except Missouri, which favors New York by a couple of hundred miles, or an average mileage in favor of the Gulf of 564 miles from each. By a careful study of the table any person must admit the fairness of the comparison. Then what does it mean? It means that the West pays the railroads for conveying export freight to the seaboard on 5,876,000 tons over 564 miles of road more than would be necessary if there were deep harbor facilities on the Gulf coast of Texas. East of the river a very low rate charged, is one cent per ton per mile on the commodities mentioned, while west of the river it will average three cents per ton per mile; a fair average, taken together, would be two cents per ton per mile, which means that the West pays \$11.28 per ton more freight to the seaboard than by a Gulf route. Experience teaches that the charges from Galveston Texas, to Liverpool on cotton is but  $\frac{1}{2}$  cent per hundred higher than from New York to Liverpool. For argument's sake we will assume that it costs twenty-eight cents per ton more, instead of ten cents per ton more, and it still leaves \$11 per ton in favor of the proposed Gulf route, and which should be saved to the West, in dollars it amounts to \$64,636,000 per annum that the Eastern monopolies are grinding out of the West, and, by such methods and usurious rates of interest for the use of their millions used in farm and city improvements, they have kept the West poor.

As will be seen, we ask \$10,000,000 for Texas harbors, the annual income of which amounts to \$64,636,000, or nearly 650 per cent. upon the investment. Can the Government make a more magnificent investment? We say not, and as we fifteen millions of people are as much and infinitely more to the Government than the handful of capitalists who control the ways of trans-continental transportation, we demand the appropriation or investment by the Government for our relief.

The relief of the Eastern markets of our surplus production would equally benefit Illinois, Wisconsin, Michigan, Indiana, Ohio and Kentucky, the only States east of the Mississippi that actually produce a surplus to ship to Eastern markets. They should stand with us, and with us demand that the West shall be provided with such shipping facilities as shall stop the accustomed glutting of Eastern markets. Let us add interior Mexico, which is fast opening up to the United States a market that promises to be quite as valuable as our trade with Europe. Compare distance to Galveston and New York from ten of the principal cities of Mexico:

APPROXIMATE TABLE OF DISTANCES FROM  
NEW YORK CITY TO THE FOLLOWING  
POINTS.

	<i>Miles.</i>
New York to Chihuahua.....	2000
New York to Ures.....	2180
New York to Culiacan.....	2240
New York to Durango .....	2080
New York to San Luis Potosi.....	2000
New York to Cerro Gordo.....	2080
New York to City of Mexico.....	1980
New York to Vera Cruz.....	2260
New York to Matamoras .....	1680
New York to Colivea.....	2280
	<hr/> 20780

APPROXIMATE TABLE OF DISTANCES FROM  
TEXAS GULF COAST TO THE FOLLOWING  
POINTS:

	<i>Miles.</i>
Chihuahua to Galveston.....	600
Ures, Mexico, to Galveston.....	840
Culiacan, Mexico, to Galveston....	805
Durango, Mexico, to Galveston....	640
San Luis, Potosi, Mex., to Galveston	560
Cerro Gordo, Mexico, to Galveston..	580
City of Mexico, Mex., to Galveston.	685
Vera Cruz, Mexico, to Galveston....	660
Matamoras, Mexico, to Galveston...	240
Colivea, Mexico, to Galveston.....	810
	<hr/> 6420

Difference in favor of Galveston or Aransas Pass 14,360 miles, an average of 1436 miles of rail haul saved by improving harbors at the points suggested, or \$28.72 per ton for every ton of freight now transported via New York from the Mexican cities mentioned above. We would not be surprised if the total saving to the pro-



ducer and consumer of this western country would amount to one hundred millions of dollars the first year of the proposed deep harbors.

A new West is forming, and despite the efforts of Wall Street is growing rich, influential and populous. The time is almost here when the West will hold the balance of power of this great government, and in the near future will be in the majority in the nations' councils ; soon the West will receive her just share of the appropriations for public improvements ; soon will the West elect a president, a Western man, and then we may expect to see the National Capitol removed to a more central point less exposed, and the nations' wealth so equitably disbursed as to build up another New York, a rival of that proud city in wealth and population, protected by nature's best fortification—distance, and not by useless fortifications that the modern navies scoff at and safely disarm from distance too great for fort armament to reach. The West is famous throughout for its vast mountains, ranches, herds, crops, railways, etc., and the people for their vastly (to Easterns), enlarged ideas. It is said one Western man can tell stories so large that it requires a dozen Eastern men to believe.

The average citizen of the West is so impressed and enthused by the vastness of everything, that when he really believes and feels all that he says, he is put down by the slow-going and pent-up New Englander as an enthusiast, and his statements are regarded as gross exaggerations. We note, however, that the most skeptical Easterner when he comes West becomes more enthusiastic over the possibilities, resources, etc. of the West than the old timers, and they in fact are those who are sounding our praises the loudest. The West develops that in man which is virtuous or vicious in proportion to the largeness of the country, either men are very good or very vicious, increased civilization is fast eliminating the bad, and is evidenced in Denver, the tide is strongly in the opposite direction, and Denver reputation is world-renowned for its schools and churches, in fact Denver could almost claim to be the city of churches, having 66 in number, capable of seating 40,000 persons, nearly the entire population over fifteen years of age.

According to good authorities the West embraces 785,000 square miles of tillable land, 645,000 of grazing lands, nearly one half of which under the proposed system of irrigation will be classed as tillable land ere many years, it is safe, therefore, to estimate the arable lands in the United States west of the Mississippi River, at a round 1,000,000 square miles, and grazing 430,000; timber 260,000, and 425,000 square miles of waste or useless lands except that which contains mineral, of the latter it is safe to estimate one-fourth is valuable for its precious metals, and as much more for coal and iron, and much of the mineral land has sufficient timber for local demands. The mineral area is far from being waste land, as it produces annually more in value than an equal area in agriculture. The arable area of the East is reduced by local causes to about 700,000 square miles, every acre of tillable land West is equal to one acre East, so that in agricultural possibilities we are nearly one and one-half times the East. In grazing lands we stand alone, there being none East of the river. In mineral lands we may be said to possess the entire area of the United States, as the minerals produced East are insignificant in comparison, also in timber, exclusive of Alaska, of which William Seward once said : "Alaska is destined to be the ship yard of America." That was because of the immense timber resources of that far off Territory of the United States. Every State and Territory west of the Mississippi except Kansas and Nebraska, are more or less producers of all the precious metals and coal. They each produce an inferior quality of coal, but are known as strictly agricultural States. The annual out-put of the mineral producing region West of the Mississippi river is estimated by competent authorities at about \$1,000,000,000, about one-half of the value of the agricultural produce of the entire United States, and

is estimated by competent authorities at about \$1,000,000,000, about one half of the value of the agricultural produce of the entire United States, and much greater than the value of the West's present agricultural product. Dr. Strong in his publication entitled "Our Country," says: "Beyond a peradventure, the West is to dominate the East. With more than twice the room and resources of the East, the West will have probably twice the population and wealth of the East, together with the superior power and influence which, under popular government accompany them. The West will elect the executive and control legislation. When the center of population crosses the Mississippi, the West will have a majority in the lower House, and sooner or later the partitions of her great territories, and probably some of the States, will give to the West the control of the Senate. When Texas is as densely peopled as New England it is hardly to be supposed her millions will be content to see the 62,000 square miles east of the Hudson send twelve senators to the seat of government, while her territory of 262,000 sends only two. The West will direct the policy of the Government, and by virtue of, her preponderating population and influence will determine our national character and therefore, destiny.

Since prehistoric times populations have moved steadily westward, as De Tocqueville said, "as if driven by the mighty hand of God." And following their migrations, the course of empire, which Bishop Berkeley sang has westward taken his way. The world's scepter passed from Persia to Greece, from Greece to Italy, from Italy to Great Britain the scepter is to-day departing. It is passing on to "Greater Britain," to our mighty West, there to remain, for there is no further West; beyond is the orient. Like the star in the East which guided the three kings with their treasures westward, until at length it stood still over the cradle of the young Christ, so the star of empire, rising in the East, has ever beckoned the wealth and power of the nations westward, until to-day it stands still over the cradle of the young empire of the West, to which the nations are bringing their offerings.

The West is to-day an infant, but shall one day be a giant, in each of whose limbs shall unite the strength of many nations."

The movement has been inaugurated that will lead to the formation of a Western Commercial Alliance or Congress that will concentrate the West and force Congress to do that for the West that the West asks for and is justly entitled to. The East will not much longer snub the West, and treat their modest requests with contempt.

The movement referred to above is the organized efforts to secure government aid to construct deep harbors on the Gulf Coast, briefly the following is a history of the movement:

For years Texas had been struggling to procure suitable national appropriations to secure deep water ports on the coast of that great commonwealth. One person was more active than many of the pronounced deep water men, viz., W. P. Caruthers, late of Corpus Christi, Texas, now of Denver, Colorado. The energetic young editor published the Corpus Christi Caller, and is still one of the editors. He advocated the measure in Texas until he became disgusted with the dilatory methods of the so-called friends of deep water ports, and having made a visit to Denver about one year ago he became very favorably impressed with the "Chicago of the West," and settled here permanently. He made his plans and life-long ambitions regarding deep harbors known to the author of this work, and by the author's suggestion Mr. Caruthers presented the matter to the Colorado Real Estate Exchange, and after the second attempt succeeded in getting that body interested and after some delay it was determined to call an Inter-State Deep Harbor Convention at Denver. Fort Worth hearing of the contemplated action of Denver called a Convention at that place to meet July 10th, 1888, and requested the



attendance of Colorado delegates, which invitation was accepted, and the following delegates from Colorado were in attendance. J T Cornforth, W. P. Caruthers, John C. Gallup, W. G. Sprague and F L. Dana, of Denver, General R. A. Cameron and W. E. Pabor, of Cannon City, Judson Bent, of Colorado Springs. General R. A. Cameron, of Cannon City was chosen chairman of that convention. The Colorado delegation succeeded in having a resolution passed by the Fort Worth convention requesting the Governor of Colorado (Alva Adams), to call an Inter-State Convention, which was done. The preliminary proceedings being as follows:

The Committee of Arrangements was composed of thirteen members of the Colorado Real Estate Exchange and thirteen members of the Chamber of Commerce of Denver, as follows W P. Caruthers, Theo. W Herr, F D. Morse, John Mattler, W. G Sprague, J C Montgomery F L. Dana, Jas. A. Jones, Henry Apple, A. C. Fisk, R. A. Gurley, O. J Frost and Frank W Gove, from Real Estate Exchange. I. B. Porter, M. J. McNamara, Joseph E. Bates, E. M. Ashley W N Byers, E. F Hallack, Geo A. Bushnell, Chas. A. Raymond, J T Cornforth, Scott J. Anthony, Jas. A. Tedford, Thos. E. Poole and H. B Chamberlin from the Chamber of Commerce. The Committee elected I. B. Porter chairman, F L. Dana secretary, and E. M. Ashley treasurer.

By request of the Committee, Gov Alva Adams issued the following call

CALL FOR THE DEEP HARBOR CONVENTION, ISSUED BY THE GOVERNOR OF COLORADO,  
STATE OF COLORADO, GOVERNOR'S OFFICE,  
DENVER, COLORADO, July 27th, 1888

I have the honor to invite your attention to the following resolutions, adopted by a Convention held at Fort Worth, July 10th, 1888

WHEREAS, All the States and Territories west of the Mississippi are interested in the pressing need of a deep water port on the coast of the State of Texas; and

WHEREAS, Denver, Colorado, being centrally located, and very accessible to all the vast sections of country interested, therefore, be it

*Resolved*, That the citizens of the City of Denver be requested by their delegates to this Convention, to call an Inter-State Deep Water Convention to be held in that city at such date as they may see fit, not later than August 28th, 1888.

In accordance with these resolutions, and in compliance with the request made by a committee of the Denver Chamber of Commerce and Board of Trade, and the Colorado Real Estate Exchange. I hereby call an Inter-State Deep Water Convention of the States and Territories West of the Mississippi river, to be held at Denver, on the 28th day of August, 1888.

The basis of representation at that Convention will be as follows: Two delegates from each Senatorial district. to be appointed by the Governor of the State or Territory. One delegate from each county to be appointed by the Board of County Commissioners, or by the Chairman of said Board. Five delegates from each Chamber of Commerce, Board of Trade, or commercial body in the various cities. One delegate from each town having a population of 3,000 or less to be appointed by the Mayor or President of Trustees of said town. In each city or town having over 3,000 inhabitants, one additional delegate for each 5,000 or fraction thereof. Five delegates from each Editorial Association in the States and Territories interested. In all cases where delegates are appointed, an equal number of alternates shall be appointed by the same authority

The purpose of this Convention is to secure united and harmonious action of the middle and western states in a movement looking to the establishment of a Deep Water Harbor somewhere upon the Gulf of Mexico. So important will be



the influence of such a harbor upon the prosperity of every farmer, artisan, miner and citizen of the great West, that it should impel every official to whom this call is directed, to take prompt and effective action that will result in a great and influential Convention.

The Governors of the following States and Territories have been appointed Vice-Presidents of the Denver Inter-state Deep Harbor Convention. Arkansas, Missouri, Iowa, Minnesota, Nebraska, Kansas, California, Texas, Oregon, Nevada, Colorado, Dakota, New Mexico, Wyoming, Montana, Washington, Idaho, Utah, Indian Territory and Arizona.

ALVA ADAMS,

*Governor of Colorado.*

The Committee made arrangements with Senator Tabor for the use of his Grand Opera House during the sitting of the Convention.

Opening of the Inter-State Deep Harbor proceedings.

Mr. I. B. Porter, Chairman of the Committee of Arrangements, called the meeting to order at 2 p. m. August 28th, 1888.

Mr. Porter said: Ladies and Gentlemen—It devolves upon me by the arrangements of the Executive Committee to call this Convention to order. I desire to say that we have undertaken to allot the space on the ground floor of this hall as nearly in proportion to each state as we possibly could with the information that we had of the attendance. We may ascertain after a few moments that it is not properly apportioned, in which case we will re-apportion it and accommodate the delegates from each state and territory.

F. L. Dana, Secretary of Committee of Arrangements, then read the call for the Convention issued by Governor Adams of Colorado, as appears above.

Chairman Porter then said: The Committee has invited Governor Alva Adams to welcome the delegates to Colorado:

#### GOVERNOR ADAMS' ADDRESS:

Governor Alva Adams: Mr. Chairman and Gentlemen: To me has been given the pleasant duty of extending a welcome to the delegates to this Convention. Colorado welcomes you as partners in a great enterprise. She welcomes you as she extends her greeting to those who are bound and linked together in the same commercial destiny. Before this Convention there is a great object to be obtained, and by its attainment there will come a rich and perennial harvest of prosperity. Transportation is the measure of the welfare of every American community. Every mile that is added, every cent that is added to the cost of transportation of our produce of our supplies is that much a tax upon the industry of our citizens. In recognition of this principle we have met here to-day so that we may counsel together and by our united wisdom we may find some way that will lead to the building of a Deep Water Harbor somewhere upon the Texas coast of the Gulf of Mexico. (Applause.) Where that harbor is to be is a matter of indifference to most of us, (applause), who are removed and distant from the influence of local competition and local rivalry. (Applause.) That point must be selected by competent hands. Let an honest, let a conscientious, let a scientific investigation determine which is the most feasible point, (applause), and then let every personal desire, every sectional interest, every local ambition be merged and forgotten in one patriotic effort for the general good. (Applause.) If more than one harbor can be obtained so much the better. (Applause.) But if one only can be secured, then let not its chances and its hopes be blighted and destroyed by the rivalry of other and disappointed rivals. (Applause.) But my friends, it matters not what course of action we may decide upon, it matters not what method we may elect to pursue here to-day, for between us and success there is a determined and bitter conflict, which will require our greatest exertions, our greatest ability and the greatest harmony to succeed. Every

port upon the Atlantic coast will be arrayed against us. Every material interest of the great East and the North will be against us; and then there is another enemy, that has controlled legislation and has affected the weal or woe of the people to a serious extent in some cases, and that is the great lines of transportation leading from the West to the East over the lines of latitude. These are the Scipios who would like to see every port upon the Mexican Gulf filled up and ruined just as Carthage and Corinth were destroyed when their magnificence and their growing traffic began to cast a shadow over the supremacy of the imperial city. (Applause). As our mind takes hold upon the subject, as we begin to look into it and consider the extent of territory and the resources that will be encircled and benefitted by the building of a great harbor upon the north coast of the Gulf of Mexico, in which may float the commerce of the world, the greatness and the grandeur of this scheme are so imposing that its proportions seem to be described only by the words—sublime—magnificent. Wherever, my friends, shall be established a deep harbor upon the Gulf of Mexico, there we shall see spring up from the sands one of the most magnificent metropolises in this country. It will become the pride and the glory of the South, and it will at the same time be one of the richest jewels of that great circle of cities which to-day adorn the bosom of our country. This is the city that will be erected there, and when we look into history, when we consider the seaports of antiquity, those who by their commercial supremacy have left an impress upon the annals of history, which time cannot efface, and for whose possession empires have been lost and won, when we look upon those ancient capitolis and we come to examine the resources that fostered and nourished them, we find that they were insignificant compared with the wealth that now surrounds and is tributary to the western part of the Gulf of Mexico. (Applause). Nineteen states and territories will be direct beneficiaries of the deep water harbor, and these nineteen states and territories cover an area that is equal to one-third of our national domain, and decade after decade since this territory was won from the wilderness the inhabitants of that part of our country has almost doubled until to-day the population of this great region comprises nearly one-fifth of our many millions. And yet, great as has been the development, great as is the present population comparatively speaking, it is but the infancy of a mighty manhood. Our productions to-day are almost beyond our calculations, and for us to predict the possibilities of the future would be to strain the imagination and to build up a pyramid of figures that would seem almost fabulous. The statistician tells us of the production of this great country. He will tell you of the cotton, of the corn, of the grain and of the stock. He will tell you of the iron, of the coal, of the gold and the silver. Then let him take and compare the acreage from whence those marvels have been produced with the extent of virgin territory which to-day lies untouched by the ax or the plough, by the shovel or the hoe, and we then can begin to form some conception, and begin to grasp something of that greatness, something of that traffic, and of that tonnage which will roll its wealth down upon the wharves of this prospective port. (Applause). In the future this city will grow up and we will all be proud of it, and all be proud that we have been one of those who initiated the building, or the movement that has laid the foundation for the greatness that will come. Every interest that we possess is directly concerned in this movement. Our future pleads for its success. Nature has pointed the way which our traffic should go. The waters of this great region, the trend of the land is all towards the Mexican Gulf, and we thus have a great natural way for the future arteries of commerce, and any line of traffic, any method of transportation that will select these natural inclinations will find that it can perform its mission with less friction and at a minimum cost. If a deep water harbor is established upon the Texas coast, giving to us a direct and an air line to the sea, and to the markets that lie beyond, I believe that the saving in

freight alone in one year after that harbor is opened will more than amount to the total cost of the building of the most extensive harbor upon the Gulf of Mexico. (Applause). But, my friends, in going through my calculations I have made no estimates that have not been based on the traffic that arises from American soil. But, back of that there are still great possibilities that lie on the west of the Gulf. Across the Rio Grande there lies another empire of wealth, and the greater part of the Republic of Mexico is naturally tributary to the Texas coast and port. (Applause). Mexico, my friends, I look upon as a natural and legitimate field for the enterprise and the hopes of our people (applause), and I do not think that I am doing violence to national faith when I predict an early abolition of every Mexican custom house by the peaceable conquest of the American flag over the dark hued millions of Mexico. (Applause).

Between the South and the West there should be an alliance. They are natural allies as against the balance of the Union upon great industrial questions, (applause), and if we join our hands together, and in accord and in harmony we work together, then will our voice be heard in the council chambers of the Nation. This, my friends, is what we should do here, work in accord and in harmony, the West and the South, joining in a great industrial alliance,—(applause)—that will bring to us an abundant harvest of prosperity in the time to come. We look to this Convention for wise and deliberate action. This Convention is not convened together for the consideration of little things. (Applause). It is not here to pursue and continue local conflicts. (Applause). We have met here to discuss problems and questions that affect a mighty empire, and it is not, my friends, a real estate scheme. (Applause). We are not bearing aloft the gaudy banners of any town site boomers. (Applause). But, as we come here we meet in faith, and we meet in the trust that great good will come from our deliberations. It is a question not for little men, or little things, but it is one that should call for the highest wisdom and the deepest thought of the statesman. It is worthy of the greatest effort. It is worthy of the most deliberate and conscientious action, and, my friends, I know that you will bring to your consideration and to this Convention all of those qualities which we look to from the great states that are here represented. I predict, my friends, although to-day success may not come, to-morrow it may be distant, but it will so surely come as we use wisdom, as we use discretion and firmness in the advocacy of our cause. (Applause). It will surely come, and while I want to see that success certain, I hope that this will be the initial movement that will bring us together upon every occasion when the interests of our great section of country are involved. (Applause). And I hope that not only success will come, my friends, but that the friendly alliances that you will form here, that this meeting together in social intercourse, in friendly communion, will result in creating a closer friendship and fraternal feeling between the citizens from all the states that stand represented before me to-day. (Applause).

The Convention then elected Ex-Gov. John Evans, of Denver, temporary chairman, and H. A. Lewis, of Dallas, Texas, temporary secretary. The permanent officers were Gov. John M. Thayer, of Nebraska, president, and F. L. Dana, of Denver, Colorado, secretary. There were present 752 delegates from 19 states and territories west of the Mississippi River. The result of the Convention after a four days' session was the adoption of the following resolutions:

WHEREAS, It is the sense of the States of Texas, Colorado, Kansas, Nebraska, Missouri, Iowa, Arkansas, California and Nevada, and of the Territories of New Mexico, Wyoming, Utah, Arizona, Dakota and Indian Territory, in Convention assembled at Denver, Colo., under the call of His Excellency Alva Adams, Governor of the State of Colorado, that the commercial, agricultural, mining, manufacturing and stock interests of all that part of the United States lying west of the Mississippi



River and the commercial and naval advantages of our country generally, demand, a permanent deep water port on the northwest coast of the Gulf of Mexico; therefore, be it

*Resolved*, First, That the senators and representatives in Congress, from the states hereinbefore referred to, and the delegates from the territories herein set forth, be and they are hereby most earnestly requested to procure at once a permanent available appropriation of the amount necessary to secure a deep water port on, the northwest coast of the Gulf of Mexico, west of the  $93\frac{1}{2}$  degrees west longitude capable of admitting the largest vessels, and at which the best and most accessible harbor can be secured and maintained in the shortest possible time, and and at the least cost.

Second—That for the purpose of carrying into effect the foregoing resolutions, committees, to consist of five from each state and three from each territory, representative in this Convention, be appointed by their respective delegations; that it shall be the duty of said committees to see that the object of said resolution be properly presented and vigorously urged before Congress, and to that end and with the view of co-operation and concert of action, the chairmen of the respective committees shall be and they are hereby constituted and created a central committee.

Third—That the states and territories, and commercial bodies represented in this Convention approve the idea of securing deep water on the Gulf Coast of Texas by private capital, and they do hereby respectfully request and respectfully urge their senators, representatives and delegates in Congress to lend their united support to such bills as may be introduced for such purpose with proper safeguards for the protection of the government; provided that the port or point suggested be one desirable for the location of a deep water harbor.

WHEREAS, The need of a deep water harbor on the coast of the Gulf of Mexico, directly and vitally affects nearly one-fourth of the people of the United States, we deem the request contained in the foregoing resolutions, of such great and paramount importance as to justify their early reference to the official notice of the President of the United States, in order that he may be duly and fully informed and be able, as contemplated in the Constitution of the United States, to "give to Congress information of the state of the Union, and recommend to their consideration such measures as he shall judge necessary and expedient;" therefore be it

*Resolved*, That a copy of the foregoing resolutions be transmitted to the President of the United States, and that he be requested to make in his next annual message to the Congress of the United States, such recommendations with reference to the location of a deep water harbor on the northwest coast of the Gulf of Mexico as to him shall seem proper and expedient; and

WHEREAS, It is of vital importance to all that vast region of country between the Mississippi River and the Pacific Ocean, including Minnesota, Oregon and Washington Territory on the north, and Arkansas, Texas and California on the south, that a harbor deep enough to float any vessel that sails the ocean, and ample enough to protect the fleet that may be required to handle the commerce of this whole region of country, nearer to it than any other Atlantic seaport, be constructed on the northwest coast of the Gulf of Mexico as soon as practicable; and,

WHEREAS, Such a harbor is of such great national importance that it is worthy of an ample appropriation from Congress for its construction; and,

WHEREAS, We have already adopted a request to the present members of Congress to favor such appropriations, but would make that request more emphatic; therefore,

*Resolved*, That the legislatures and people of all the states and territories included in the region described be earnestly requested hereafter to elect no senators, representatives or delegates to Congress except such as are known to be heartily in

favor of such an appropriation, and will earnestly and faithfully work for it until such harbor is completed.

The following committeemen were appointed, as provided in the first resolution, as a permanent committee:

ARKANSAS—T. F. Sorrells, Pine Bluff, Chairman; Wm. Fishbach, Fort Smith; Gov. Simon P. Hughes, Little Rock; J. W. T. Tiller, Pine Bluff; Wm. M. Duffy, Princeton.

TEXAS—J. A. Carrol, Denton, Chairman; Walter Gresham, Galveston; G. W. O'Brien, Beaumont; John Hancock, Austin; Uriah Lott, San Antonio.

COLORADO—John Evans, Denver, Chairman; C. C. Davis, Leadville Secretary; Alva Adams, Denver; A. Wilson, Durango; W. S. Jackson, Colorado Springs

KANSAS—Howel Jones, Topeka; Alexander Caldwell, Leavenworth; W. E. Hutchinson, Wichita; J. S. Emery, Lawrence; Marsh M. Murdock, Wichita.

WYOMING—Francis E. Warren, Cheyenne; J. M. Carey, Cheyenne; Fred J. Stanton, Cheyenne.

MISSOURI—D. H. Armstrong, St. Louis; A. L. Tomblin, Stanberry; Col. H. F. Fellows, Springfield; J. S. Logan, St. Joseph; W. W. Anderson, Louisiana.

UTAH—E. Willden, Beaver; Chas. T. Stoney, Beaver.

NEW MEXICO—W. W. Griffin, Santa Fe; Frank C. Plume, Taos; Numa Raymond, Las Cruces.

NEBRASKA—Champion S. Chase, Omaha, Chairman; O. E. Goodell, Lincoln, Secretary; Joel Hull, Minden; Herman Kountze, Omaha; W. N. Nason, Omaha.

IOWA—James M. Pierce, Des Moines, Chairman; A. P. Chamberlin, Des Moines, Secretary; Dr. W. O. Kulp, Davenport; D. W. Smith, Des Moines; B. Zevely, Council Bluffs.

ARIZONA—W. E. Stevens, Mayor of Tucson; A. Leonard Meyer, Phoenix; Royal A. Johnson, Tucson.

Later, on meeting of General Committee the following officers were elected: President: John Evans, Denver, Colorado. Secretary: F. L. Dana, Denver, Colo. Treasurer: Alva Adams, Pueblo.

Later, on meeting of Central Committee, the same persons were chosen as officers of the Central Committee.

At this time arrangements were made for a subsequent meeting of the committee at Dallas, Texas, October 17th, 1888. The meeting was held, resolutions passed providing for a systematic effort to get the Federal Congress to take preliminary steps to rapidly complete the harbor work in progress on the Gulf coast at the earliest possible moment. A committee was provided for to proceed to Washington to urge immediate action by Congress. The Hon. Walter Gresham, of Galveston, Texas, was the only member of that committee present at Washington, and to his untiring efforts the Great West is indebted for a Board of Engineers being ordered to select the most eligible site for a deep harbor on the Texas Gulf coast, and a small appropriation to defray their expenses. While the recognition by Congress was small, it shows that the Inter-state Deep Harbor Committee has succeeded in starting the wedge that will ultimately accomplish the object sought.

The Inter-state Committee is a basis for the building up of a Western Commercial Congress that will represent all the states and territories west of the Mississippi River, before the National Congress, and demand increased appropriations for general internal improvements; besides encouraging or aiding inter-state commerce, and thereby increase the business of their several states.

#### A PLAN FOR A WESTERN COMMERCIAL CONGRESS.

It has been the author's opinion that the Western States and Territories should select delegates to a Commercial Congress, with representation in proportion to the commercial importance of each, in a lower house, and an upper house, com-

posed of committeemen from the various legislatures, as follows: The lower house to be composed of business men, members of some commercial organization, appointed by the Governor of the State or Territory. A just proportion of delegates from each state at this time would probably be Missouri 75, California 60, Iowa 50, Minnesota 40, Texas 36, Kansas 30, Louisiana 20, Arkansas 10, Nebraska 7, South Dakota 3, Colorado 4, Oregon 3, Washington 3, Montana 3, North Dakota 3, Idaho 3, Utah 3, New Mexico 3, Arizona 3 and Indian Territory 3; giving a total representation of 361 members.

The upper house (or senate) to consist of six delegates from each state and territorial legislature; three from the lower house and three from the senate, amounting to 114 members, who would be sent as committeemen at the expense of their respective states and territories. A precedent has been established for such committees in St. Louis from various Western States and Territories to discuss the subject of beef inspection and quarantine.

In joint session a President of the Congress should be chosen, and duties prescribed. Each house then assemble separately, and select their presiding officers, clerks, etc. Resolutions and recommendations should be thoroughly discussed by both houses, and passed by a majority before receiving the signature of the President. The proceedings would form a basis for a report to the several legislatures by their committeemen. Questions discussed would be confined to that which affects the Great West, or any portion thereof. The expenses of the members of the lower house should be borne by their respective states in the way of appropriations, similar to that made by the late Colorado Legislature for the expenses of the members of the Inter-state Deep Harbor Committee. That committee is composed of representative men from nearly all of the states and territories comprising the Great West, and having an organization, should meet and take steps to provide for a Commercial Congress, turning over to the new organization the responsibility of securing deep harbors on the Gulf of Mexico.

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## IRRIGATION RESERVOIRS AND DUTY OF WATER.

From Report of State Engineer, of Colorado, relative to reservoirs and duty of water, which is applicable to all the arid region, we quote the following:

The construction of reservoirs for the storage of water for irrigation has received a greater impetus during 1888 than during any other period in the history of the state. On the 16th and 17th of March of this year, there convened in the City of Denver, pursuant to a call made by the Governor, upon the request of a few wise and patriotic citizens, a large number of men representing various water districts, communities and organizations, and interested in the storage of water for irrigation. This assembly took the name of the "Storage Reservoir Convention." Papers pertinent to the matter under consideration were read, and discussions of the questions in this way presented followed. The work of the convention culminated in a memorialization of Congress. The result of this and kindred efforts on the part of those interested in the progress of agriculture in the region of the west dependent upon irrigation, is embodied in "An act making appropriations for sundry civil expenses of the government, for the civil year ending June 13th, 1889, and for other purposes," whereby it was provided (*inter alia*) that there be appropriated, "for the purpose of investigating the extent to which the arid region of the United States can be redeemed by irrigation, and for the selection of sites for reservoirs and other hydraulic works necessary for the storage and utilization of water for irrigation, and the prevention of floods and overflows, and to make the necessary maps, includ-



ing the pay of employes in field and in office, the cost of all instruments, apparatus, materials, and all other necessary expenses connected therewith, the work to be performed by the Geological Survey, under the direction of the Secretary of the Interior, the sum of \$100,000 or so much thereof as may be necessary," and that "the Directors of the Geological Survey, under the supervision of the Secretary of the Interior, shall make a report to Congress on the first Monday in December of each year, showing in detail how the said money has been expended, the amount used for actual survey and engineer work in the field in locating sites for reservoirs, and an itemized account of the expenditures under this appropriation. And all the lands which may hereafter be designated or selected by such United States surveys for reservoirs, ditches or canals for irrigation purposes, and all the lands made susceptible of irrigation by such reservoirs, ditches, or canals, are from time to time henceforth hereby reserved from sale, as the property of the United States, and shall not be subject, after the passage of this act, to entry, settlement, or occupation, until further provided by law; *Provided*, That the President may, at any time in his discretion, by proclamation, open any portion or all of the lands reserved by this provision to settlement under the homestead laws."

It is not necessary to support at this late date the advisability of the construction of reservoirs in Colorado. It is shown by the discharge sheets accompanying this report that the streams are at flood tide in the spring, and carry but small quantities of water during the fall and winter months. It is fortunate that, since the greatest flow of the streams is not confined to the irrigating season, it should occur during or just before that season. The time that the greatest quantity of water will have to be stored is thus short, so that the percentage of water that will be lost from the reservoirs by percolation and evaporation will thus be quite small compared with the percentage of loss that would accompany the storage of water in the fall and winter months. It is in the securing and presentation of a knowledge of the water supply in certain portions of the state that this department has endeavored to advance the cause of reservoir construction. Such information as this office contains has been placed at the disposal of the Director of the Geological Survey. What has already been accomplished in the direction of reservoir construction is only partially shown in the plates accompanying this report and in the tabulated statements before given. There is no doubt but that many reservoirs are being constructed outside of the district platted, and of which no notice has been filed in this office.

The portion of the precipitation in the mountains which is available for irrigation on the plains is the excess of the total precipitation over these quantities of water utilized by plants and animals, absorbed by or percolating into the earth, and evaporated, and any measure that would result in the decrease of this loss would increase the available water for irrigation, and *vice versa*. The quantity of water which passes into the soil by absorption or percolation is, of course, not known, but it may be assumed to be small and beyond the power of man to materially affect. But the quantity of water evaporated and utilized by plants is by no means beyond man's ability to modify. Evaporation is the re-vaporization of water; it takes place from wet surfaces exposed to the air; is more rapid, as a rule, on a clear day after a heavy shower, and is most rapid if, besides these conditions, there is a strong, dry wind. Other things being the same, evaporation is greater the higher the temperature. It is, in general, greater from the surface of water than from land, and it is said to be one-third as rapid from the surface of trees as from the surface of water.

Attention has hereinbefore been called to the fact that east of the Continental Divide, the precipitation of snow and rain in the mountains is much greater, in fact double, than upon the plains and valley lands, and that it is from this precipitation that the streams are directly or indirectly supplied. Just what proportion of this

mountainous precipitation is lost, is not known, but the loss is probably not far from 60 per cent. of snow and rain-fall for average years. It would seem to be in excess of that for the years of minimum, and less for the years of maximum precipitation.

It can be determined by calculating from the area of the water-shed and the natural discharge of these streams, about what depth of water over the entire water-shed of the stream is equivalent to the discharge of the streams in any one year. If this be done for the years of mean precipitation, and the water be taken from the corresponding depth over the water-sheds, as indicated by the precipitation records, it may be found what depths of water over the water-shed is lost to the purposes of irrigation.

This information may be used as a basis from which to estimate the discharge of streams which have not been measured. Of course, such an estimate is only roughly approximate. The area of the water-shed, not only of the streams measured, but of all of the streams running from the mountains of Colorado, can be quite accurately determined from the topographical maps and atlas of Colorado, prepared by F. V. Hayden, United States Geologist.

It is to be regretted that records of precipitation have not been taken at numerous places in the mountains. The record at Pike's Peak can only furnish a basis for a very rough estimate of the precipitation in the mountains east of the Continental Divide.

The evaporation from the surface of water on the plains of Colorado is, as a rule, between one-eighth and one-quarter of an inch per diem. These matters have been set forth as a preface to a theory recently advanced by Major J. W. Powell, Director of the Geological Survey, concerning the effect of the removal of our mountain forests upon irrigation, which it seems desirable to present, in connection with the consideration of storage reservoirs, since, as is readily seen, it is intimately connected therewith. As Major Powell's view of this subject has been recently made known, so that time has not been afforded for the mature consideration of it; as it involves questions concerning which but little is known, and the importance of which is too great to permit of hasty conclusions, and as the consideration of the subject naturally falls to the State Forest Commissioner, it is only briefly set forth, and the position is indorsed here to that extent only which is indicated by a strict interpretation of the remarks made in connection therewith. This new theory is in direct opposition to the prevailing belief that the preservation of our mountain forests is necessary to the welfare of irrigation, and may be stated in two parts as follows:

PART I.—By reason of the mountain forests in Colorado, the total quantity of water flowing through the canons of the streams is less than would be the case were the forests removed.

PART II.—The quantity of water available for late irrigation on the plains would be materially increased by the removal of the mountain forests.

These are, no doubt, startling statements to many. Our forests have for so long been credited with the benevolent purpose of holding around their roots the precipitation upon the mountains until the proper time arrives to permit the water to gravitate towards the channels, and thus to the plains for the benefit of late irrigation, that it is hard in one breath to divest the mind of a belief in their generous qualities, and feel assured, as this theory requires, that they selfishly thrive, at the expense of the weaker, but more valuable vegetation which irrigation fosters.

The old theory that the removal of the mountain forests is prejudicial to irrigation interests, seems to rest primarily upon the assumptions that the forests tend to increase the rainfall, and that they equalize the flow of water in the streams throughout the year, and that in consequence thereof more water is caused to fall than would otherwise fall, and that not only a greater supply of water is thus furn-



ished the streams, but that it is furnished later in the irrigation season when most needed, for the reason that the snows lay long in the shade of the forests and are slowly melted. It is held, however, by recent able writers and students of the subject, that forests exert no appreciable influence on the rainfall. This is, for certain reasons, connected with the relation borne by currents of air to high peaks, more likely to be true on the mountains of Colorado than in most other localities, and as a general principal, it would seem to be sustained by the fact, that the most careful observations, extending in some cases over hundreds of years, have failed to indicate with reference to any country where irrigation has been practiced, that by reason of the vegetation so fostered, however luxuriant it may have been, any increase of rainfall has been occasioned. That forests (especially those which are deciduous, *i. e.*, drop their leaves) situated on low mountains, such as those at the head-waters of the upper tributaries of the Ohio river, tend to equalize the flow of water in the streams, and especially to prevent floods, it is believed no one denies. The forests, situated near the summits of the ranges in Colorado, are especially effective in keeping up a late flow of the streams, is admitted by all, for reasons that will shortly appear.

The new theory would seem to rest upon the assertions that the late water now furnished for irrigation by the streams come chiefly from the great drifts of snow above timber line; that the mountain forests of Colorado prevent, to a great extent, the snows falling below timber line on our mountains from drifting into deep chasms and ravines, and consequently prevent the formation of additional great snow drifts; that there is less loss by evaporation from the snow gathered in drifts than where the snow is not so collected, on the same principle that a greater evaporation occurs from a given quantity of water exposed in a broad and shallow basin than occurs when the water is confined in a deep and narrow depression; that there is a much greater loss by evaporation from the snow sheltered by the trees, and spread out for long periods to the action of the air ever circulating in currents over the mountains, than from snow exposed to the sun, and permitted to melt rapidly, and that the moisture absorbed by the forests of the mountains is very considerable, and if carried to the plains would nourish a very great acreage of crops.

In this connection it may be observed, that the late water for irrigation furnished many of the streams, does come chiefly from the great snow drifts above timber line, though other streams—Bear Creek, for example—are supplied during the late season almost entirely from springs; that the forests do prevent, to a very great extent, the mountain snows from drifting into deep ravines; that the mountain forests do absorb a large amount of moisture; that spring floods do bring down great quantities of water; that in some of the streams more water is carried during a few days of the spring than during the entire succeeding period embraced between the 15th of August and the 15th of October; that the evaporation of snow gathered in drifts is much less, as a rule, than from snow not so collected; that forests protect the snow beneath them by choking the high winds, which sometimes evaporate in a few hours great fields of snow from areas not protected by trees.

A great diversity of conditions is observable in Colorado, even above the 9,000-foot contour line, where are presented southern exposures and northern exposures, localities visited by easterly winds, others by westerly winds, some by dry winds and some by comparatively moist winds, and localities where the snow, if slowly melted, would seep into the soil, re-appearing at lower levels as springs, and others where the snow, if so melted, would percolate into the porous strata and never appear again upon the surface; localities where, if the mountain forests were removed, the snow would, perhaps, be lapped up by dry winds, to be precipitated beyond the confines of the state, while in other places, if the forests were removed, the snow might be



blown into great drifts on the ragged breasts of great mountains where the sun could scarcely melt it during the entire season.

These diversified conditions presented in Colorado, considered in connection with the theories and remarks pertaining thereto, above given, would seem to indicate that neither theory is in harmony with the peculiar conditions observed in all portions of the state.

It may not be amiss to call attention here to the fact that the laws governing water, in whatever form we find it, are most difficult to fathom, and that no theory based upon experiments and observations of it under certain conditions, can be applied without modification to water under different conditions. To illustrate this, water in an ordinary ditch of economical cross-section flows most rapidly in the center of the channel and just below the surface. It might be assumed that such would be the case in a rectangular flume also, yet in some rectangular flumes (where the depth is about equal to the width), the maximum velocity of water is found near the bottom. It is evident, at any rate, that the removal of the mountain forests will materially affect the quantity of water supplied to the streams, and that the effect of this removal of the forests will be different in different portions of the state.

Looked at in the light of the new theory, the application to beneficial use of the forests of certain portions of the state may be welcomed, for it will be felt that the moisture they absorb and encourage to evaporate will be rendered, by their removal, available for irrigation, and thereby there will, in effect, be transported from the inaccessible mountain tops to the accessible plains, many thousands of acres of fertile lands. On the other hand, it would seem that the removal of the forests from certain portions of the mountains would be but an invitation to dry winds to carry with them to unknown regions, large quantities of the moisture which is so much needed by the irrigator, or cause the waters of these portions of the mountains to flow to the plains in floods at seasons when they were not the most needed.

Whatever the beliefs which are entertained on this subject may be—and an effort has been made to state them and the reasons therefor impartially, though this has of course been done imperfectly, since the proper presentation of them would require great time and research—the rapid removal of our forests is actually taking place, and results beneficial or injurious will certainly accompany this change. The ordinary floods observable in our streams may, beyond doubt, be attributed chiefly to this cause. These flood waters, during a portion of the season, are not used directly for irrigation. They will, unless stored, be lost to the use of the irrigator. To store the excess of flood water will require a great expenditure of money. Before this money can be wisely expended, a great deal of information will have to be collected and furnished the people of the state. It is the policy of other irrigating counties to collect such information, and no doubt will be of Colorado. But this state may delay the securing of this desirable information until after the failures of extensive projects by its citizens, occasioned by lack of this information, shall force the attention of the legislature to the subject, or, it may profit by the experience of other irrigating countries, rapidly push the collection of statistics pertinent to reservoirs, and be ready to meet in this respect the demands shortly to be made for this information. Of primary importance, in this connection, is a collection of information concerning the water supply; the demands already made upon this supply; the evaporation from water surfaces not only on the plains, but in the mountains; the evaporation from the soil; the precipitation throughout the various portions of the state; the character of the sediment in our streams and the laws governing the motion and deposit thereof, and the duty of water in various districts throughout the state.

## DUTY OF WATER.

By the duty of water is meant the efficiency of a known quantity of water in the irrigation of crops. It is usually expressed in the number of acres that a cubic foot of water per second, running as long as needed during the irrigation season, will irrigate. The cubic foot of water per second of time, sometimes called the second foot, has been previously described herein, and stated to be the unit of measurement adopted in the distribution of water from the natural streams of the state into the irrigating canals and ditches. There has recently come into use, though not yet recognized by our laws, a new unit of measurement, applicable more especially to the consideration of water stored in reservoirs, which is designated the acre foot of water or acre foot. By the acre foot is meant 43,560 cubic feet, or the quantity of water which will exactly cover one acre of surface to a depth of one foot. Any statement in which the duty of water in Colorado is expressed as a definite quantity is arbitrary. As previously remarked, the laws governing water under certain conditions are not applicable to water under different conditions. For example: The observed duty of water in northern Italy, where the mean annual precipitation is about thirty-eight inches, and where the atmosphere, which bathes and in part sustains plant life, is quite humid, can be only very remotely indicative of what the duty of water is or should be on the plains of Colorado, where the mean annual precipitation is only about fifteen inches, and the atmosphere very dry. Since the annual fall of rain on the plains of Eastern Colorado varies from about ten to about twenty inches, the same quantity of water will not be required each year for the irrigation of any given acreage of crops, or a given quantity of water distributed, under otherwise similar conditions, will irrigate a greater area during the years of maximum precipitation than during the years of minimum precipitation.

Some kinds of crops require more water than others, and the same crops on some soils require more water than on other soils. Two cubic feet of water per second carried on to a field in one body will, under conditions otherwise the same, irrigate more than twice the area that one cubic foot per second carried alone would irrigate. Many additional statements might be made showing that the duty of water, when expressed in the number of acres that can be irrigated by a second foot of water running during the irrigating season, differs with each year, each character of crops, soil, sub-soil, etc.—in fact, with the slightest change in any of the governing conditions.

As there is a demand for general results in this matter, it may be stated, relative to the duty of water on the plains of Colorado, measured where distributed to the land, that one second foot, running throughout the irrigating season, in addition to about five inches of rain-fall during April and May, and 4.5 inches during June, July and August, if distributed with fair care to diversified crops, on what might be called average land, would irrigate from sixty to seventy acres. It is noticed that, to accomplish this duty, it must be measured where placed upon the land. This is not always considered in speaking of the duty of water. A second foot of water diverted from a stream at a point some miles from the land to which it is designed to distribute it, might, by reason of evaporation and seepage, never reach the land. It is sometimes convenient, however, to refer to the duty of water of certain streams or canals, when reference is had to the quantity of water flowing in the stream, usually at its canon, or permitted to enter the canal.

As in ditches of considerable length, twenty-five to thirty miles, it is not uncommon to lose by evaporation and seepage 25 to 30 per cent. of water turned into the ditch, the estimated duty of the water turned into the ditch might be placed at say fifty acres. But as the ditches are used, they lose less water, as a rule, from year to year by percolation; and the lands to which they supply water need, after



several applications of the water, in some cases at any rate, less water than at first; and since as water increases in value, it is more economically used, the duty of water, whatever be the locus of the measurement, is continually increasing in Colorado, and it is thought that when distributed with the greatest care, and in sufficient quantity to be handled without great waste, during the seasons of average rain-fall, and to crops and soils fairly conditioned for its economical use, that the duty of water should approach ninety acres to the second foot. If the duty of water in connection with some of our streams is considered, it will be found that, notwithstanding all losses by seepage and evaporation, the efficiency of the water can be placed at over one hundred acres per second foot. This is accounted for by the return of much of the water diverted by the upper ditches to the channel of the stream, and its re-diversion by lower ditches, so that portions of it are again and again distributed to the land. With more storage reservoirs this duty will be still further increased.

There are methods of distribution by which water can be caused to effect a duty far surpassing that possible with the best surface irrigation, which is the form of irrigation considered above. One of these methods which is peculiarly adapted to fruit culture, and the cultivation of garden vegetables, is that wherein perforated pipes are laid below the surface of the ground and distribute water to the roots of plants and trees. The attention of this department has been called by Mr. F. E. Farish, of Arizona, to the remarkable success obtained by the use of this method of cultivation, applied to his orchards in Yuba County, California, by the late Hon. G. G. Briggs, who has been known to declare that one acre of land irrigated in this way would yield returns the net value of which was equivalent to that obtainable from fifty acres of land irrigated on the surface. Sediment in the water distributed to the perforated pipes, it may be observed, is fatal to the success of this plan, so that the water must be settled before being used.

MAJOR J. W. POWEL'S REPORT ON STORAGE RESERVOIRS UNDER THE GEOLOGICAL SURVEY.

The following is the report in full of the Geological Survey on the division of the waters of the Platte and Arkansas rivers and their tributaries for purposes of irrigation:

I have the honor to acknowledge the receipt of the following Senate resolution, with instructions endorsed thereon:

IN THE SENATE OF THE UNITED STATES, }  
August 29, 1888. }

*Resolved*, That the Secretary of the Interior be directed to inquire and report to the Senate at its next session the extent to which the diversion of the waters of the Platte and Arkansas Rivers and their tributaries in Colorado for irrigation and other purposes, affects the flow of the waters of those streams in the lower valleys, and especially during the growing season; and whether, in his opinion, the title conveyed by the government to lands fronting on said stream covers the privilege of diverting water therefrom beyond that necessary for use thereon for irrigation and mining purposes, and to report what action is needed to protect the rights of riparian owners along the waters of said streams in the states of Kansas and Arkansas, and what measures can be devised to increase the flow of water in those streams during such seasons.

(Attest).

ANSON G. MCCOOK, Secretary.

[Indorsement].  
DEPARTMENT OF THE INTERIOR, }  
September 1, 1888. }

Copy. Respectfully referred to the Director of the United States Geological Survey, with request that he will make the inquiry as requested by the resolution,



as to the extent and effect of the diversion of the waters of the streams specified, and what measures can be devised to increase the water in such streams, and report the result to this department.

WILLIAM F. VILAS, Secretary.

In compliance with the above instructions the following brief preliminary report is submitted:

It is not possible to report fully and satisfactorily on the subject at the present stage of its investigation, as accurate observations have not yet been made to a sufficient extent to give good quantitative results. The work of the survey of the arid lands now in progress will ultimately give good data for the solution of the problem, and at such time it is probable that a satisfactory report can be made.

#### REPORT.

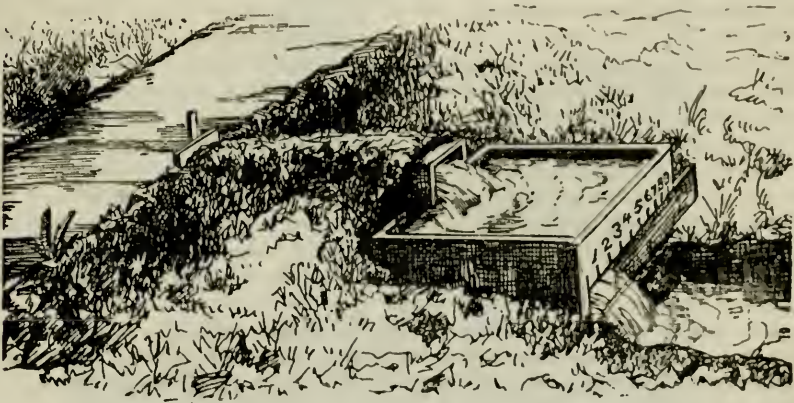
The Platte and the Arkansas have their sources in the mountains of Colorado and Wyoming, but after passing the Colorado and Wyoming lines, they receive great additions to their volumes from the storms and streams of the lower country; so that but a small portion of the water which these rivers discharge into the Missouri and Mississippi comes from the mountain regions. In Colorado and Wyoming all agriculture is dependent upon artificial irrigation, as the water which comes direct from the heavens to the agricultural lands is insufficient to produce crops. The same is true of the western portion of Kansas and Nebraska. In this portion of the arid region under consideration, embracing a part of Colorado, a part of Wyoming, a part of Nebraska, and a part of Kansas, agriculture is possible only by diverting the water of the streams out upon the adjacent lands; and the real question is this: What effect will the development of irrigation in Colorado and Wyoming have upon irrigation in Nebraska and Kansas? The North Platte, the South Platte and the Arkansas present distinct problems; they must therefore be considered separately in this statement.

The Platte has two branches—the North Platte, draining a large area in Wyoming; the South Platte, a large area in Colorado. Much of the region drained by the North Platte in Wyoming is at so great an elevation above the sea, that agriculture cannot be made profitable—that is, the climate is too cold and the season too short to cultivate as profitable series of crops; but some portions of the Wyoming region lie at lower altitudes, where profitable agriculture can be carried on. The area of such lands, however, is not sufficient to utilize all the waters of the North Platte. Ultimately a large volume of this water can be used across the line in Nebraska to better advantage than in Wyoming, and the storage of the waters of the North Platte, which will be chiefly in Wyoming, will greatly benefit Nebraska—in fact, Nebraska is far more interested in the storage of the waters of the North Platte than Wyoming, for in general the storage of the waters of the North Platte will benefit Wyoming to a very slight degree. It must be understood that irrigation can be practiced without storage by using the waters of the running streams during the season of irrigation, which is very short, usually averaging for various crops about two months in this region. Storage increases the area of irrigable lands by holding back in reservoirs the water that would otherwise run to waste during ten months of the year. It is this water, to be stored about the headquarters of the North Platte, by which the people of Nebraska are to be chiefly benefited.

The South Platte has its source in the mountains of Colorado. In that state irrigation is already greatly developed, so that practically all the water of the South Platte which flows from the mountains during the season of irrigation is already used in critical seasons. Whether this water should be surrendered by the people of Colorado to the people of Nebraska; whether the agricultural industries along the Platte and its tributaries in Colorado should be destroyed in order that new in-

dustries in Nebraska may be created, is a question that every one can easily answer for himself. But there is a further condition worthy of consideration. If the waters of the South Platte now used in Colorado were used in Nebraska, the area brought under cultivation in the latter state would be very much smaller than the area now under cultivation in Colorado by the use of the same waters.

This fact results from well known physical conditions. In that arid region the rain is condensed on the mountains; comparatively little falls on the arid plains, not enough to produce perennial streams. When the waters debouch from the mountains into the plains their channels are radically changed; they are narrow, deep and clear; where they run across the plains they are wide and shallow, and their waters are loaded with mud. The muddy waters are spread out below in wide channels of sand. A stream may be several hundred yards wide and only a few inches deep. The water permeates these sands and a large portion is evaporated; so that a stream steadily diminishes in volume from the mountains across the arid plains until a more humid region is reached, where it again increases in size. It is for this reason that the waters of the South Platte will irrigate a much larger area in Colorado near the mountains than in Colorado near the Nebraska line; and the area which they will irrigate in Nebraska is still smaller.



MEASURING THE FLOW OF WATER.

It is probable that three acres can be irrigated near the mountains of Colorado where only one acre can be irrigated in Nebraska. This must be understood, however, as an estimate, and not as actually determined by stream gauges.

The waters of the South Platte flowing through the irrigation season, are already substantially used near to the mountains, and the important question to be determined is what effect will storage have upon the supply of water from this stream? It has already been stated that the waters of the North Platte can be advantageously and economically stored in the mountain region, but this is not true of the South Platte. With some important exceptions the waters of the South Platte must be stored below, as the declivity of the mountains drained by that river is in general too great to afford favorable places for their storage; they will therefore have to be stored in the foot hills and on the plains.

All of this stored water will decrease the volume of the South Platte where it crosses the Colorado-Nebraska line during the non-irrigating season, but when the mountain waters of the non-irrigating season are stored in this manner, and poured upon the lands of Colorado, and used for agricultural purposes, a part of this stored water will be evaporated to the heavens, but another part



—and a large part—will be returned to the Platte, where it can be recovered and again carried to the irrigable lands further down the stream in Eastern Colorado and Western Nebraska.

This general statement may therefore be made: The use of the water which falls as rain during the irrigating season near to the mountains in Colorado, as it is now chiefly used, greatly diminishes the volume in Western Nebraska; but, on the other hand, the storage of water during the non-irrigating season, to be used during the irrigating season will greatly increase the water available for Nebraska during the irrigating season. Taking the facts as they are, namely, that the waters of the South Platte falling during the irrigating season are already used in Colorado, the prospect for irrigation from the South Platte in Western Nebraska depends upon the storage of the waters falling during the non-irrigating season. The greater the amount of water stored in Colorado, the greater will be the area irrigated in Nebraska.

The waters of the Arkansas that flow during the irrigating season are partly used in Kansas, but chiefly in Colorado; so that already in critical seasons the river runs dry near the Colorado-Kansas line. The future development of irrigation in the valley of the Arkansas therefore depends chiefly upon the storage of water. This storage can be accomplished with advantage, in fact with great economy, in the mountain regions of Colorado. Along the headwaters of this stream in the mountains there are many mountain meadows and morainal valleys, where lakes can be created to store large bodies of water at small expense. When the waters of these mountain streams are stored in the upper regions, where they are comparatively clear, the reservoirs have a permanent value, from the fact that they will not be speedily filled with sediment; but if reservoirs be constructed below on the plains, and the rivers taken out where they are muddy, and excessively muddy, as is the case with the Arkansas, the storage basins will be speedily filled with sediment and destroyed. If stored on the plains, as in the case of the South Platte, the water must be diverted from the natural channels where they debouch from the mountains and carried in canals to the storage basins. This adds greatly to the expense of storage.

But there is another consideration affecting this question of great importance. In the lowland reservoirs the evaporation from the surface would be 50 to 75 inches, and the lowland reservoirs would therefore lose a large body of water in this manner, while in the highland reservoirs the evaporation would probably be not greater than 25 inches, and might often be less. Whenever highland reservoirs are possible, the water must be stored in the upper regions, and these conditions control in the case of the Arkansas River. The waters of the Arkansas cannot be taken out within the boundaries of the State of Kansas and stored in reservoirs, from the fact that they contain so much silt that the reservoirs would be speedily obliterated. The flow in waters in the irrigating season is already provided for. All additional irrigation from these waters would be so small that all state interests may be neglected.

The irrigating season on this river is, on an average, something more than two months, while the waters run to waste for more than nine months. It is this waste water that is to be stored in the mountains. Whatever is thus stored will decrease the volume passing the Kansas-Colorado line during the non-irrigating season; but will greatly increase the volume passing the line during the irrigating season; and as in the case of the South Platte, the prospect for irrigation in Western Kansas depends upon the storing of water in Colorado. The greater the storage the greater will be the area irrigated in Kansas.

It must be understood that in the above statement the primary facts and principles have been set forth, and general results given. Exact quantitative results cannot be given at this stage of the investigation; but if the work of the irrigation



survey is continued until the survey is completed, practical quantitative results will be afforded.

When the investigation was begun under the instructions of the Secretary, I had not carefully considered the subject, and had made no collection of the available facts relating thereto; and I supposed that the waters of the South Platte and of the Arkansas falling in Colorado would be wholly or chiefly utilized in Colorado; and I reasoned in this manner from the consideration that the people of Colorado are already engaged in these industries, and are more likely to specially develop irrigation industries than are the people in Kansas and Nebraska. But there was another consideration which engrossed my attention for the time. On the arid



Opening the Water.

plains no perennial streams are born. The water which falls from the heavens is in the main evaporated back to the heavens, though when great storms, fall storm waters, collecting for a few hours, or a few days at most, flow into the perennial streams that head in the mountains and cross the plains; and I suppose that like results would follow from the spread of irrigating waters on the lands. But experience in California, in Utah, in Colorado, and on the Gila in Arizona, abundance exhibits the fact that the waters used in irrigation are but partially evaporated, and

that a very large quantity finds its way again to the streams. It is thus that the facts of experience have modified preconceived hypotheses.

Ultimately a very large area in Kansas and Nebraska will be irrigated by impounding the local storm waters of that region, and the topographical conditions are very favorable for such enterprises. But besides the irrigation which it is possible to accomplish through the impounding of storm waters, considerable areas will be irrigated through the utilization of the waters of the North Platte, the South Platte and the Arkansas—all contingent, however, upon the condition that the waters of these streams are stored above.

It must be remembered that the upper Arkansas, the North Platte and the South Platte are not navigable streams. They are all exceedingly broad, muddy rivers, having great declivity, and so shallow as to be practically impassible for even canoes during the greater part of the year. They are thin sheets of mud tumbling down a highly inclined plain; so that the interests of navigation are in no way affected by the use of these streams for agriculture.

The use of these streams for agricultural purposes will have no practical effect upon their uses as powers in Kansas and Nebraska. Because of the great amount of sediment which they carry, they have little value as powers; for if hydraulic works were constructed along their upper courses, it would be at an enormous expense, on account of their great width, and because they run through vast accumulations of sand; and if the streams were dammed, and ponds created, they would speedily be filled by the enormous inflow of sand. There is yet a further consideration. The rain which falls in Kansas and Nebraska furnishes a sufficient volume of water for the Platte and Arkansas alike for all possible prospective use as mechanical powers.

From the above statement it will appear that the question of the use of the Platte River and of the Arkansas, is one affecting agriculture only, and that the amount of irrigable lands redeemed in Nebraska and Kansas by the waters of the Platte and Arkansas depends upon the amount of water stored in Colorado and Wyoming.

Commissioner of the General Land Office, Stockslager, makes the following report on the same subject:

I have the honor to return herewith the resolution of the Senate of the United States of August 29th, 1888, which you referred to me on the first of September, 1888, with a request for the expression of my views "upon the inquiry as to whether the title conveyed by the Government to land bordering on the streams specified, conveys the privilege of diverting water therefrom beyond what is necessary for use thereon for irrigation and mining purposes, and what action is necessary to protect the rights of riparian owners along the waters of said streams in Kansas and Nebraska."

This resolution refers to the diversion of the waters of the Platte and Arkansas Rivers and their tributaries for irrigation and other purposes in Colorado, and inquires, first, to what extent such diversion affects the flow of the waters of those streams in the lower valleys, and especially during the growing season; second, whether the title conveyed by the Government to lands fronting on said streams covers the privilege of diverting water therefrom, beyond that necessary for use thereon for irrigating and mining purposes; third, what action is needed to protect the rights of riparian owners along the waters of said streams in Kansas and Nebraska; fourth, what measures can be devised to increase the flow of water in these streams during such seasons.

Of these matters only those embraced under the second and third heads come within your request for an expression of my views.

In reference to the former, I have to state that the title conveyed by the Government carries with it the right to the enjoyment of the water privileges attaching



under the common and statute law to the proprietorship of the land. This right is affected by certain provisions of the acts of Congress of July 26, 1866, (14 Stat., 253) July 9, 1870, (16 Stat., 217), and May 10, 1872, (17 Stat., 91) now embodied in sections 2339 and 2340, United States Revised Statutes. These sections read as follows:

Sec. 2339. Whenever by priority of possession, rights to the use of water for mining, agricultural, manufacturing or other purposes have vested and accrued, and the same are recognized and acknowledged by the local customs, laws and the decisions of courts, and the possessors and owners of such vested rights shall be maintained and protected in the same; and the right of way for the construction of ditches and canals for the purposes herein specified is acknowledged and confirmed;

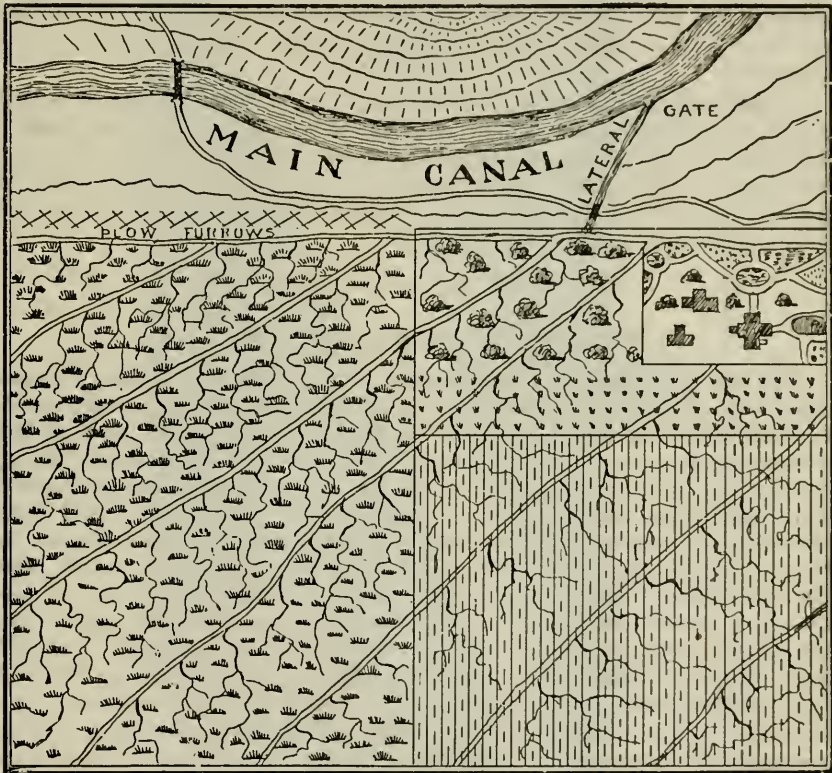


Diagram showing Main Canal and Lateral.

but whenever any person, in the construction of any ditch or canal, injures or damages the possession of any settler on the public domain, the party committing such injury or damage shall be liable to the party injured for such injury or damage.

Sec. 2340. All patents granted, or pre-emptions or homesteads allowed, shall be subject to any vested and accrued water rights, or rights to ditches and reservoirs used in connection with such water rights as may have been acquired under or recognized by the preceding section.

The foregoing statutes recognise the rights subsisting under the "local customs, laws, and the decisions of courts," to the use of water for mining, agricultural, manufacturing or other purposes, and enact that the possessors and owners thereof shall be maintained and protected in the same, and the right of way for the con-



struction of "ditches and canals" for the purposes specified, is acknowledged and confirmed. All patents granted, or pre-emptions, or homesteads allowed, are made subject to the rights so recognized, acknowledged and confirmed.

The statutes of Colorado, which provide elaborately for the regulation and protection of such water rights, may be found in the General Statutes, State of Colorado, of 1883, page 560 *et seq.*, and for information on the general subject, Gould on Waters, sections 226 to 240, inclusive, may be consulted.

The "local laws, customs and decisions of courts," so far as I am able to ascertain, appear to admit of the diversion of water from streams to an extent beyond what is implied in the expression "necessary for use on the lands fronting on the streams for irrigation and mining purposes." They seem to contemplate the conveying of the water for use beyond the land fronting immediately on the streams, and even for use in reservoirs, for mining, agricultural, manufacturing and other purposes.

In reference to the inquiry touching the right of riparian owners, I can only suggest, with the limited data in my possession, that the question, having reference to the vested rights of owners under existing laws, does not appear to be one for legislative or departmental action, and that in case of controversy the courts are open for the adjudication of the rights of such parties, whatever they may be, under the law and the facts of the particular case.

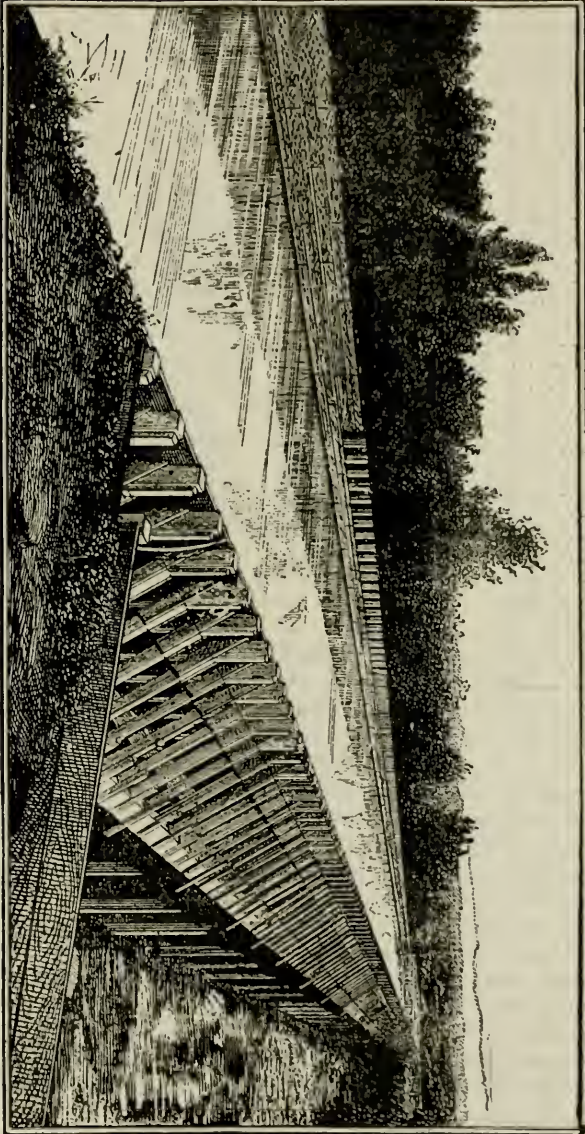
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#### BURLINGTON & MISSOURI RAILWAY.

The first spike of the above road was driven in 1869, at Plattsmouth, Nebraska. This road has 1,265.90 miles of main line, 1,516.33 miles of branches, and 372.04 miles of sidings and double tracks, making a total of 2,782.23 miles of road, including 35.71 miles operated jointly with the Kansas City, St. Joe and Council Bluffs Railway. The important cities connected with this line are Denver, Colorado; Cheyenne, Wyoming; Omaha, Lincoln, Hastings, Beatrice, Nebraska City and Grand Island, Nebraska; Concordia and Atchison, Kansas; Des Moines, Burlington, Keokuk and Dubuque, Iowa; St. Joseph, Kansas City and St. Louis, Missouri; St. Paul, and Minneapolis, Minnesota; Galesburg, Peoria, Rockford, Aurora and Chicago, Illinois. The above list of important cities on this line is an evidence of the important part this road has taken in the development of the Great West. The traffic department reports the following: number of tons of freight hauled in 1888, 2,556,715; number of passengers carried, 1,547,461; number of freight cars hauled 1 mile, 60,712,555; number of passengers hauled 1 mile, 12,752,676. The company owns the following excellent equipment: 95 passenger coaches; 75 baggage, mail and express cars; 220 locomotives; 6,141 freight cars of all kinds. They have recently added dining car service through to Denver from Chicago, and free chair cars.

This company has connecting points with other lines as follows: Cheyenne, Wyoming; Denver and Sterling, Colorado; Hastings, Kearney, Grand Island, Edgar, Wilcox, Alma, Minden, St. Paul, Ord, Loup City, Fairmont, York, David City, Columbus, Seward, Crete, Lincoln, Beatrice, Pawnee City, Schuyler, Wahoo, Dunbar, Louisville, Omaha, Nebraska City, Auburn and Falls City, Nebraska; Atchison, Washington and Concordia, Kansas; St. Joseph, Missouri.

This company has about recovered from the greatest single railroad strike the world ever saw, and is fast regaining its former prestige in the passenger line. The B. & M. have always been in the front rank when convenience and comfort of passengers have been considered, and their present equipment is unsurpassed in the land.



A Flume in the Main Canal.

TABLE OF RAILROAD MILEAGE AND TRAFFIC OF THE "GREAT WEST."

1887. STATES.	Miles of Road.	Passengers carried.	Passengers carried one mile.	Freight, tons, handled.	Freight tons, One Mile.
Louisiana .....	1,754.37	1,783,288	57,655,992	2,877,414	253,549,754
Missouri .....	7,818.58	8,800,717	332,107,165	17,238,514	2,316,443,616
Arkansas .....	2,208	814,310	34,058,459	1,262,177	194,334,168
Texas .....	7,234	2,549,832	141,748,562	4,501,387	743,744,946
Kansas .....	8,404.33	5,236,381	284,406,727	7,833,166	1,337,399,001
Colorado ..	3,013.52	914,988	74,959,240	2,764,207	313,687,230
New Mexico .....	1,219	114,998	56,607,753	298,000	151,521,042
Iowa .....	7,907	1,795,298	61,895,060	4,501,098	367,319,282
Minnesota .....	8,446.79	8,510,387	326,377,496	13,400,905	2,221,070,520
Nebraska .....	3,703	2,770,664	222,060,375	5,234,250	1,191,231,910
Dakota .....	3,555	672	6,720	5,000,000	1,000,000,000
Wyoming .....	833.30	325,000	580,000	510,000	145,619,000
Montana .....	1,062	100,000	3,500,000	750,000	22,298,700
Washington .....	923	32,240	650,000	340,705	6,814,100
Oregon .....	1,519.04	499,952	36,618,895	732,005	143,459,490
California .....	4,265.00	15,348,760	559,744,127	9,281,279	2,254,213,458
Nevada .....	954	80,000	2,300,000	396,237	10,250,000
Arizona .....	988	12,953	295,000	51,624	1,896,800
Utah .....	1,307.98	495,000	27,565,000	1,065,200	119,250,000
Idaho .....	811	.....	.....	.....	.....
Indian Territory.	422	.....	.....	.....	.....
Totals .....	68,348.19	50,175,489	2,223,136,571	78,038,168	12,794,098,987

We will not vouch for the accuracy of the above table owing to the many errors we have detected therein. It is just as we take it from "Poor's Manual of Railroads, except Dakota, and that we estimated. The table is approximately correct, though not absolutely. Idaho and Indian Territory are each omitted in estimates of freight and passenger business; Oregon, Washington, Nevada and Arizona are manifestly much under-rated. We took the liberty of correcting Mr. Poor on the railroad mileage of New Mexico, Texas, Arkansas, Iowa, Nebraska, Dakota, Montana, Washington, Nevada, Idaho and Arizona.

The table is up to July 1st, 1887, only; since that time nearly 20,000 miles of railway have been constructed in the United States, nearly all of which is credited to the territory west of the Mississippi River, and brings the grand total of railway mileage of the Great West to approximately 85,000 miles, or within a very small amount of being one-half of the railway mileage of the United States. More than that of Germany, Great Britain and Ireland, France, and Russia combined, and nearly as much as all of Europe combined. Is it any wonder, then, that we call the Great West "A Vast Empire?"



## ST. LOUIS &amp; SAN FRANCISCO RAILWAY COMPANY.

The St. Louis & San Francisco Railway includes main line and fifteen branches, covering 1,321.16 miles of road, extending from St. Louis, through Missouri into Kansas, Arkansas, Texas and the Indian Territory.

This company purchased the property of the Atlantic & Pacific Railway Company, sold under foreclosure, September 8th, 1876. In connection with the Atchison, Topeka & Santa Fe this company controls the Atlantic & Pacific, and the Wichita & Western Railways. This company is the largest owner of the bridge across the Arkansas River at Van Buren, bonded for \$474,000. January 30th, 1888, this company took possession, under lease, of the Kansas Midland, 107.20 miles, between Wichita and Ellsworth, Kansas.

The company owns 189 locomotives, 135 passenger and express cars, and 6,285 freight cars. Business for 1887 was as follows: carried 859,703 passengers, or 49,516,497 passengers one mile. Freight moved, 1,497,841 tons, or 309,496,860 tons one mile. This line has, ever since its organization, gradually increased its mileage and equipment, until to-day it ranks well up with its older competitors, and is a very popular line with passengers and shippers.

## NORTHERN PACIFIC RAILWAY.

This magnificent system of railway has grown up since 1870, at which time the first spike was driven by Governor R. D. Rice, at a place in Carleton County, Minnesota, now known as Northern Pacific Junction. This system includes 3,411.27 miles exclusive of sidings, making direct connection with each of the following splendid commercial cities: Ashland and Superior, in Wisconsin; Duluth, St. Paul and Minneapolis, Minnesota; Winnipeg, Manitoba, Grand Forks, Fargo and Bismark, in Dakota; Helena and Butte City, in Montana; Spokane Falls, Seattle and Tacoma, in Washington, and Portland, Oregon.

This company handled, in 1888, 2,597,897 tons of freight, or 704,772,506 tons one mile, using freight cars equalling 108,788,322 moved one mile. Passenger coaches 20,100,150, moved one mile; passengers carried, 1,343,737, or 159,483,895 one mile. The equipment of this line is first-class in every particular, and consists of 390 locomotives, 186 passenger coaches, 9,617 freight cars.

This road intersects only two important systems throughout its entire course—the St. Paul, Minneapolis & Manitoba system, and the Union Pacific system; and practically controls a larger agricultural region than any other two or three railway systems in America combined. It passes through the lumber section of Minnesota, the farming section of Dakota, the grazing and mineral sections of Montana, the mineral section of Idaho, and the mineral and farming sections of Washington and Oregon. It has 27 branch lines shooting off from the main line of the road, at convenient points, like branches are sent out from the main trunk of a tree, to feed and support the parent stem, this being as essential for the success of a road as for the life of a tree.

The Northern Pacific has been ably and conservatively managed during the past few years, as is evinced by the splendid financial condition of the road. The track is in good, safe condition, and rarely do we hear of an accident to a passenger train.

In 1887 this line was first opened for through travel without transfer, and the large number of passengers carried is evidence of its growing to be the popular summer route to and from the Pacific Coast. One feature alone will cause thousands to choose this route, viz: the branch line to the Yellowstone Park, which leaves the main line at Livingston and terminates at the Park limits.

## THE CHICAGO AND NORTHWESTERN RAILWAY SYSTEM.

Co-ordinate with the growth of the Great West, and generally in advance of permanent population, has been the progress of the great highways, among which stands the Chicago & Northwestern, justly pre-eminent as the

### PIONEER ROUTE.

The Chicago & Northwestern was first to establish through service between Chicago and the Pacific Coast; first to place in Western service the vestibule cars now so universally popular among long distance travelers; first to establish a solid vestibule service between Chicago and Denver; first to inaugurate through dining car service between the Rocky Mountains and the Great Lakes; in short, the first to recognize and adopt every modern improvement and device that will add to the traveler's comfort and enhance the pleasure of a journey.

The people of the Great West, remote from Eastern friends and, perhaps, childhood's home, may comfortably, and even luxuriously, revisit old scenes and renew old associations through the medium of the generous facilities offered by this enterprising modern railway.

A few years since the journey was a thing to be dreaded, a task to be performed only when absolutely necessary; time was long, hanging heavily on the traveler's hands, and at the end of the pilgrimage the sufferer worn, tired and exhausted. All this has been changed like magic, by the genius of man and the keen enterprise of the railway company. No longer are there more thorns than roses in a railway experience, but, like the flight of an eagle, swift, sure and steady, the modern palace on wheels glides across prairie, meadow and stream, annihilating time and carrying in its bosom all the comforts of home and luxuries of wealth. The destination reached, finds the contented traveler better, both physically and mentally, than when starting; old friends are greeted with warmer affection; familiar localities meet the eye with keener interest; the trip has been a draught of elixir, arousing new energies and giving new life.

The Chicago & Northwestern has been foremost of all in bringing about this happy change; its management has been ever in the van in the effort to give the public immediate advantage of every advance made in the direction of railway improvement; its aim is to *lead* all others, and its constant and growing popularity attests its success.

To this great railway no small part of the credit of developing the Great West is due; its lines have been pushed steadily forward into unoccupied territory, thus opening new fields constantly and enabling the tide of emigration to flow into sections that would otherwise have lain dormant for years. The sagacity of this policy to-day stands revealed, and enables the Chicago & Northwestern Railway to safely rely upon the intention of the people to patronize this early and constant friend of the Great West.

## CHICAGO, ST. PAUL, MINNEAPOLIS & OMAHA RAILWAY AND PROPRIETARY ROADS.

Total length of road, 1,394.35 miles, of which 833.88 miles are west of the Mississippi River, connecting Omaha, Sioux City, St. Paul, Minneapolis and Sioux Falls. During 1888 this line handled 2,475,222 tons of freight, and moved 878,535 freight cars. During same time, it carried 1,364,740 passengers, and moved 91,050 coaches.

The company own 104 coaches, 7,574 freight cars, and 235 locomotives. The equipment is first-class in every particular, and operated in a careful and conservative manner in connection with the Chicago & Northwestern Railway system. The line is deservedly popular. The number of passengers handled in 1888 is an evidence of the fact. Their road-bed is kept in excellent repair, and trains are moved rapidly and without accident. It is the direct route from Omaha, Kansas City, and points south, to the northern summer resorts, and *vice versa*, in winter to southern resorts from the bleak north. It crosses the lines of latitude, and is our ideal of the directions traffic should naturally take. The general offices are at Omaha, Nebraska.

The Chicago, St. Paul, Minneapolis and Omaha Railway is the short line from Colorado to St. Paul, Minn., Minneapolis, Minn., and all points beyond, through Omaha, and thence over the Sioux City & Pacific and C., St. P. M. & O. Railways, (Northwestern line). Through trains run solid over this line, with sleeping cars on night trains. Passengers selecting this route obtain advantage of the shortest distance, quickest time and best equipment, and secure an enjoyable trip, with all the accessories to make it thoroughly comfortable.

Mileage, December 31, 1888.—Eastern Division.—In Minnesota 36.89; in Wisconsin, 220.46.—Elroy to Westminster Street, 195.17; St. Paul to Westminster Street (leased), 1.30; Westminster Street to Minneapolis (leased), 10.10; River Falls Junction to Ellsworth, 24.82; Stillwater Junction to Stillwater, 3.30; St. Croix Draw-bridge to Stillwater Switch, 4.55; Merrillan to Neillsville, 15.37; West Eau Claire to Shaw's Mill, 2.74. Total, 257.35.

Northern Division.—In Minnesota, 2.60; in Wisconsin, 334.99.—North Wisconsin Junction to Bayfield, 178.24; Ashland Junction to Ashland, 4.38; Ashland Shore line, 1.31; Eau Claire to Chicago Junction, 80.62; Superior Junction to Duluth (inc. N. P. R. R. Bridge, 1:59 miles), 73.04. Total, 337.59.

St Paul & Sioux City Division.—In Minnesota, 366.27; in Iowa, 98.80; Dakota, 88.20.—St. Paul to Le Mars, 243.76; Le Mars to Sioux City (leased), 25.20; Minneapolis to Merriam Junction (leased), 27.00; Lake Crystal to Elmore, 43.48; Heron Lake to Pipestone, 55.10; Sioux Falls Junction to Mitchell, 130.73; Luverne to Doon, 28.00. Total, 553.27.

Nebraska Division.—In Iowa, .94; in Nebraska, 240.18.—Missouri River to Omaha, 120.90; Coburn Junction to Ponca, 16.33; Emerson to Norfolk, 46.50; Wakefield to Hartington, 33.76; Wayne to Randolph, 21.63. Total, 241.12. Total C., St. P., M. & O. Railway, 1,388.83.

Menomonic Railway (Eastern Division)—Menomonic Junction to Menamonic, 3.01; Menomonic Junction to Cedar Falls, 2.01. Total, 5.02.

Total, whole road, 1, 394.35.

Mr. Heman Wheeler is the Western Representative of this road, headquarters in Denver, Colorado, room 8, Windsor Hotel block.



## WABASH WESTERN RAILWAY COMPANY.

The first spike for this extensive system was driven on North Market Street, St. Louis, in 1846, and it might be added here, was the first spike driven west of the Mississippi River. The road has had many ups and downs, and has been in receiver's hands several times; that, however, has not impaired the standing of the road, for equipment and roadbed, but rather the reverse, as the receiver could expend the entire net receipts upon the equipment and operation of the road, so that now the Wabash Western ranks high as a safe road to travel over, or ship freight by. The entire system has finally fallen into the hands of the bond-holders,—which means the Gould party—and we may expect soon to see it merged into the Missouri Pacific system. The total length of the road is 1,038 miles, with 764.40 miles of sidings and double track, with Glasgow and Columbia branches. Important cities connected by this line are: St. Louis and Kansas City, Missouri; Des Moines and Ottumwa, Iowa; Chicago, Illinois; and Detroit Michigan. During 1888 this company handled 2,799,733 tons of freight; moving 814,505, freight cars; carried 1,351,607 passengers, and handled 125,385 passenger coaches.

The company owns 144 passenger coaches, 5,899 freight cars, and 131 locomotive engines. The following connections are made: A., T. & S. F., at Kansas City, Mo.; Central Iowa, at Ottumwa and Givin, Iowa; Chicago & Alton, at Kansas City, St. Louis and Clarks, Mo.; C. & N. W., at Des Moines and Council Bluffs, Iowa; C. K. & N., at Kansas City, Mo.; C. B. & K. C., at Bloomfield and Moulton, Iowa; C. B. & Q., St. Louis, Mo; Ottumwa, Iowa; Des Moines, Iowa; Clarinda, Iowa; Council Bluffs, Iowa; Malvern, Iowa, and Shenandoah, Iowa; C., R. I. & P., at Belknap, Des Moines, and Ottumwa, Iowa; Gallatin and Kansas City, Missouri; C. M. & St. P., at Ottumwa & Council Bluffs, Iowa; C., S. F. & C., at La Plata and Lexington Junction, Missouri; C., St. P. & K. C., at Des Moines, Iowa; and Conception, Missouri; Hann. & St. Jo., at Chillicothe, Macon and Kansas City, Missouri; Kansas City, Belt Ry., at Kansas City, Missouri; K. C., Ft. S. & M., at Kansas City, Missouri; K. C., St. Jo. & C. B., at Kansas City and Birmingham, Missouri; Keokuk & Western, at Greenwood Junction, Missouri; Louisville & Nashville, at St. Louis, Missouri; Mo. Pac., at Kansas City and St. Louis, Missouri; Mobile & Ohio, at St. Louis, Missouri; Mo., Kansas & Texas, at Moberly, Missouri; Ohio & Miss., at St. Louis, Missouri; Q., O. & Kansas City, at Kirksville, Mo.; St. Jo., St. L. & S. F., at Lexington Junction, Missouri; St. L., A. & T. H., at St. Louis, Missouri; St. L. & Hann., at Gilmore, Missouri; St. L., I., M. & S., at St. Louis, Missouri; St. L., K. C. & C., at St. Louis, Mo.; St. L., K. & N. W., at St. Peters, Missouri; Vandalia, at St. Louis, Missouri; Union Pacific, at Kansas City, Missouri; and Council Bluffs, Iowa; Cleve, St. Louis & K. C., at St. Charles, Missouri.

By the foregoing it will be seen that this road forms an important part of our great Western Railroad System, making the most important connections, and is a connecting link worthy of special attention. When traveling westward, be sure and consult your comfort by investigating the merits of this line. The general offices are at St. Louis, Missouri.

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NOTE.—Where the \* appears in the following table, that amount does not include value of school lands, but represents only the balance of available school fund on hand June 30th, 1888. The public schools own nearly 3,000,000 acres of land, valued at from \$1.25 to \$500 per acre; some having been recently sold at the latter figure.

## PUBLIC SCHOOLS OF THE STATES AND TERRITORIES OF THE GREAT WEST.

STATES AND TERRITORIES.	No. Public Sch'l Houses in State, Jan. 1st, 1889		Value of School Houses in State, Jan. 1st, 1889.		Estimated Population of States, Jan. 1st, 1889.		Number of Pupils.		Amount of Public School Fund.		Number of Colleges		Number of Pupils.	
			\$											
Kansas.....	8,775		8,608,202 00		1,800,000	531,910			\$5,000,000 00					
Missouri.....	9,189		9,803,786 00		3,216,871	610,550			10,731,244 00		106		14,613	
Minnesota.....			8,162,021 00		1,250,000	253,894			9,195,438 20		11			
Nevada.....	152		235,795 95		70,000	9,828			1,211,392 26		1		122	
Texas.....	3,498		2,895,224 64		2,640,550	364,744			2,112,440 00					
Iowa.....	12,800		12,000,000 00		1,800,000	639,238			4,250,000 00					
Wyoming.....	124				100,000	5,654			132,870 18*		1			
Colorado.....	820		3,238,021 00		1,500,000	76,212			395,612 80		15		2,000	
Dakota.....	3,763		2,844,511 00		800,000	104,876			9,550,712 00					
Oregon.....	1,386		1,159,747 50			86,574								
Arkansas.....	2,452		744,067 20			3,8129								

## PUBLIC SCHOOLS OF THE IMPORTANT CITIES OF THE GREAT WEST.

CITIES.	Private School Bldngs.	Value of School Property.		No. of Teachers Employed	Total Salaries per annum.		No. of Pupils in Attendance.	No. of Pupils No. of School Age.		No. of Col-leges.	No. of Pupils.		Estimated Population of the City, Jan. 1st, 1889.	
		\$			\$									
Kansas City, Missouri..	29	1,200,000 00		239	153,159 17		16,950	39,289					200,000	
Lincoln, Nebraska.....	14	450,000 00		82	40,000 00		4,475	8,000	3		400		50,000	
Keokuk, Iowa.....	7	125,000 00		51	27,118 00		2,400	5,109					15,000	
Topeka, Kansas.....	19	400,000 00		105	48,269 10		5,500	10,994	2		460		40,000	
Minneapolis, Minnesota.	44	1,600,000 00		455	310,000 00		19,200						210,000	
Davenport, Iowa.....	10	310,000 00		100	61,342 73		4,005		2		100		30,000	
Galveston, Texas.....	10	206,374 00		90	58,000 00		4,000	9,560					47,348	
Omaha, Nebraska.....	37	750,000 00		258	191,000 00		13,000	20,753	3		500		110,000	
Los Angeles, California.	22	461,280 00		150	115,396 80		6,497	12,000					80,000	
Sacramento, California.	13	252,000 00		90	65,945 95		3,269	6,193					28,000	
Austin, Texas.....	12	100,000 00		60	34,710 00		2,591	4,320	7		700		25,000	
San Francisco, Calif'na.	64			806	741,950 4		42,330	79,713					300,000	
St. Louis, Missouri.....	106	3,528,449 00		1,079	788,656 00		58,889	123,000	3				459,000	
Portland, Oregon.....	6	21,800 00		84	72,520 25		3,063	8,199					40,000	
St. Paul, Minnesota.....	36	2,000,000 00		375	325,000 65		15,427		3				200,000	
Denver, Colorado.....	25	1,99,658 00		203	169,872 00		12,610	19,300	7		1,000		135,600	
Lawrence, Kansas.....	11			33	14,030 00		1,763	3,664					20,000	

# THE TEXAS PAN HANDLE ROUTE

IS THE ONLY DIRECT MEDIUM OF TRAVEL

BETWEEN the Gulf Coast and the Mountains. This Great Trunk Line has just been Completed, and the Seasons of 1888-89 are the first in which the Summer Tourist from the South has had the opportunity to investigate the Beauties and Pleasures of a Trip to and through the mighty Rockies and the Resorts of Colorado, Utah, Oregon and California.

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## Round Trip Excursion Tickets

At Greatly Reduced Rates, will be on sale between May 1st and October 15th, good to return until October 31st, from all points South to points in Colorado and the Great Northwest or the Pacific Coast. These Tickets are good to stop off at pleasure along the route within given limitations, and the rates are quite as low or lower than have ever been enjoyed from the South to the Northern Resorts.

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### NOTE THESE LIMITATIONS.

#### ❧ COLORADO ❧ SUMMER ❧ EXCURSION ❧ TICKETS ❧

Will be on sale from May 1st to October 15th, inclusive, with return limit to October 31st. The transit limit on these tickets is Thirty Days from date of sale going, and Five Days from commencement of trip returning.

#### ❧ UTAH ❧ SUMMER ❧ EXCURSION ❧ TICKETS ❧

Will be on sale during the same period as those for Colorado, with a transit limit of Thirty Days' time both going or returning.

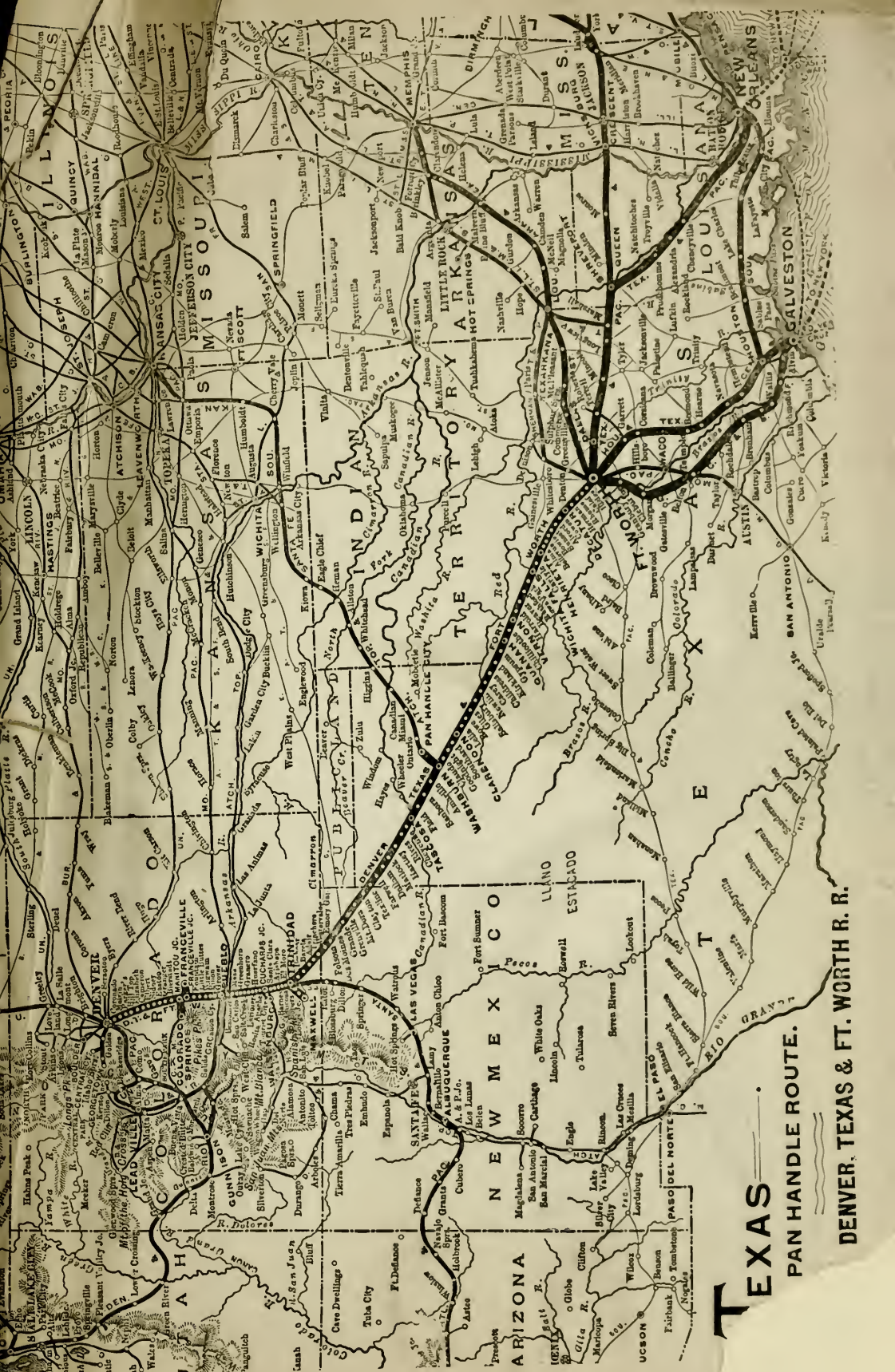
#### ❧ CALIFORNIA and OREGON EXCURSION TICKETS ❧

Are on sale all the year round, with a final limit of Six Months from date of sale in which to make the return trip. The transit limits are Sixty Days going and returning within the final limit.

Full particulars as to rates, time of trains, or other information, apply to any Coupon Ticket Agent, or call on or address—

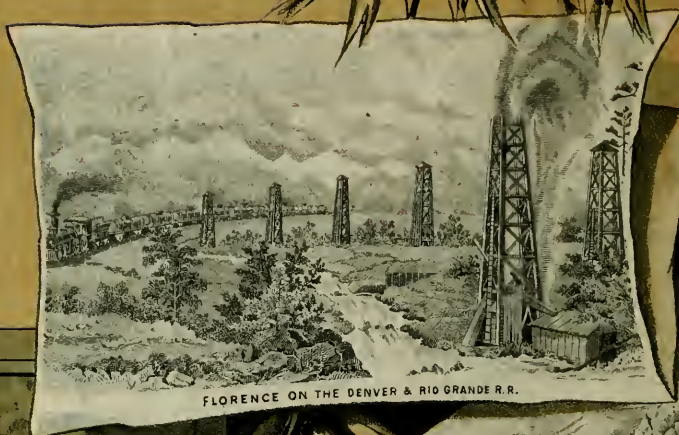
W. V. NEWLIN, Asst. G. P. Agent, Fort Worth, Texas.	J. L. A. THOMAS, Trav. Pass. Agent, Dallas, Texas	G. McD. NATHAN, Gen'l Agent, 45 St Charles St., New Or'l's.
JOHN HOWARD, Trav. Pass. Agent, Atlanta, Georgia.	C. F. MEEK, Gen. Manager, Denver.	GEO. ADY, Gen. Pass. & T. Agt, Denver.





**TEXAS**  
PAN HANDLE ROUTE.  
DENVER, TEXAS & FT. WORTH R.R.





FLORENCE ON THE DENVER & RIO GRANDE R.R.



SCENE ON THE DENVER

& RIO GRANDE RAIL ROAD

